

*The University of  
Texas  
at Austin*

**UNDERGRADUATE CATALOG**

**2012–2014**

THE UNIVERSITY OF TEXAS AT AUSTIN

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WHAT STARTS HERE CHANGES THE WORLD

Office  
of the **Registrar**  
service accuracy integrity

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# Introduction

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*The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.*

**Sam Houston**

*Cultivated mind is the guardian genius of Democracy, and while guided and controlled by virtue, the noblest attribute of man. It is the only dictator that freemen acknowledge, and the only security which freemen desire.*

**Mirabeau B. Lamar**

*Where liberty has arisen, learning must be cherished—or liberty itself becomes a fragile thing.*

**Lyndon B. Johnson**

## Mission

*The mission of the University is to achieve excellence in the interrelated areas of undergraduate education, graduate education, research, and public service. The University provides superior and comprehensive educational opportunities at the baccalaureate through doctoral and special professional educational levels. The University contributes to the advancement of society through research, creative activity, scholarly inquiry, and the development of new knowledge. The University preserves and promotes the arts, benefits the state's economy, serves the citizens through public programs, and provides other public service.*

## Honor Code

*The core values of the University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness and, respect toward peers and community.*

# Officers of the Administration

## The University of Texas at Austin

William Powers Jr., JD, *President*

Steven W. Leslie, PhD, *Executive Vice President and Provost*

Kevin P. Hegarty, MPA, CPA, *Vice President and Chief Financial Officer*

Gregory J. Vincent, JD, EdD, *Vice President for Diversity and Community Engagement*

Patricia C. Ohlendorf, JD, *Vice President for Legal Affairs*

Juan M. Sanchez, PhD, *Vice President for Research*

Gage E. Paine, PhD, *Vice President for Student Affairs*

Patricia L. Clubb, PhD, *Vice President for University Operations*

James L. Hill, PhD, *Senior Vice President*

DeLoss Dodds, BS, *Athletic Director*

Christine A. Plonsky, BS, *Athletic Director*

Nancy A. Brazzil, BS, *Deputy to the President*

Charles A. Roeckle, PhD, *Deputy to the President*

David S. Onion, BSRTF, *Senior Associate Vice President for Development*

Gwen W. Grigsby, MPA, *Associate Vice President for Governmental Relations*

Carlos E. Martinez, JD, *Associate Vice President for Governmental Relations*

## Administrative Officers of the Colleges and Schools

Judith Langlois, PhD, *Vice Provost and Interim Dean of Graduate Studies*

Frederick R. Steiner, PhD, *Dean, School of Architecture*

Thomas W. Gilligan, PhD, *Dean, Red McCombs School of Business*

Roderick P. Hart, PhD, *Dean, College of Communication*

Manuel J. Justiz, PhD, *Dean, College of Education*

Gregory L. Fenves, PhD, *Dean, Cockrell School of Engineering*

Douglas Dempster, PhD, *Dean, College of Fine Arts*

Sharon Mosher, PhD, *Dean, John A. and Katherine G. Jackson School of Geosciences*

Andrew P. Dillon, PhD, *Dean, School of Information*

Ward Farnsworth, JD, *Dean, School of Law*

Randy L. Diehl, PhD, *Dean, College of Liberal Arts*

Linda Hicke, PhD, *Dean, College of Natural Sciences*

Alexa K. Stuijbergen, PhD, RN, FAAN, *Dean, School of Nursing*

Miles L. Crismon, PharmD, *Dean, College of Pharmacy*

Robert L. Hutchings, PhD, *Dean, Lyndon B. Johnson School of Public Affairs*

Luis Zayas, PhD, *Dean, School of Social Work*

Lawrence D. Abraham, EdD, *Interim Dean, School of Undergraduate Studies*

## The University of Texas System

Francisco G. Cigarroa, MD, *Chancellor*  
Pedro Reyes, PhD, *Executive Vice Chancellor for Academic Affairs*  
Scott C. Kelley, EdD, *Executive Vice Chancellor for Business Affairs*  
Kenneth I. Shine, MD, *Executive Vice Chancellor for Health Affairs*  
Barry D. Burgdorf, JD, *Vice Chancellor and General Counsel*  
Barry McBee, JD, *Vice Chancellor and Chief Governmental Relations Officer*  
Randa S. Safady, PhD, *Vice Chancellor for External Relations*  
Amy Shaw Thomas, JD, *Vice Chancellor and Counsel for Health Affairs*  
William H. Shute, JD, *Vice Chancellor for Federal Relations*  
Sandra K. Woodley, DBA, *Vice Chancellor for Strategic Initiatives*  
Terry A. Hull, *Associate Vice Chancellor for Finance*

## Board of Regents

### Officers

Wm. Eugene Powell, *Chairman*  
Paul L. Foster, *Vice Chairman*  
R. Steven Hicks, *Vice Chairman*  
James D. Dannenbaum, *Vice Chairman*  
Francie A. Frederick, *General Counsel to the Board of Regents*

### Members

#### Terms scheduled to expire February 1, 2013

James D. Dannenbaum, Houston  
Paul L. Foster, El Paso  
Printice L. Gary, Dallas

#### Terms scheduled to expire February 1, 2015

R. Steven Hicks, Austin  
Wm. Eugene Powell, San Antonio  
Robert L. Stillwell, Houston

#### Terms scheduled to expire February 1, 2017

Alex M. Cranberg, Austin  
Wallace L. Hall, Jr., Dallas  
Brenda Pejovich, Dallas

#### Student regent with term to expire May 31, 2013

Ashley M. Purgason, University of Texas Medical Branch at Galveston

Each regent's term expires when a successor has been appointed and qualified and has taken the oath of office. The student regent serves a one-year term.

## Directory of Offices

The following list includes some University offices of general interest. A complete directory of offices on campus is published at <http://www.utexas.edu/directory/offices/>.

### Academic Calendar

The academic calendar is published in *General Information* and at <http://registrar.utexas.edu/calendars/>

The University of Texas at Austin  
Office of the Registrar  
P O Box 7216  
Austin TX 78713-7216

### Admission



*Freshmen and transfer students:* Undergraduate Admissions Center, JHH, 1823 Red River Street, (512) 475-7440, fax (512) 475-7475 <http://bealonghorn.utexas.edu/>

The University of Texas at Austin  
Undergraduate Admissions Center  
P O Box 8058  
Austin TX 78713-8058

### **Catalogs and Course Schedules**

Catalogs and *Course Schedules* are published at the registrar's Web site, <http://registrar.utexas.edu/> (<http://bealonghorn.utexas.edu/>)

### **Housing**

*Residence halls:* Division of Housing and Food Service, KIN, 200 West Dean Keeton Street, (512) 471-3136, fax (512) 475-6532 *University apartments:* Division of Housing and Food Service, 3501 Lake Austin Boulevard, (512) 232-5299, fax (512) 232-5353 <http://www.utexas.edu/student/housing/>

The University of Texas at Austin  
Division of Housing and  
Food Service  
P O Box 7666  
Austin TX 78713-7666

### **International Students**

International Office, 600 West 24th Street, (512) 471-2477, fax (512) 471-8848 <http://www.utexas.edu/international/>

The University of Texas at Austin  
International Office  
P O Drawer A  
Austin TX 78713-8901, USA

### **Medical Services**

University Health Services, SSB 2.212, 100 West Dean Keeton Street, (512) 471-4955; 24/7 Nurse Advice Line: (512) 475-6877 <http://healthyhorns.utexas.edu/>

The University of Texas at Austin  
University Health Services  
P O Box 7339  
Austin TX 78713-7339

### **Orientation**

New Student Services, SSB 3.410, 100 West Dean Keeton Street, (512) 471-3304, fax (512) 232-8211 <http://deanofstudents.utexas.edu/nss/index.php>

The University of Texas at Austin  
New Student Services  
100 West Dean Keeton Street  
Stop A5800  
Austin TX 78712-1100

### **Placement Tests**

Center for Teaching and Learning, Student Testing Services, 2616 Wichita Street, (512) 232-2662, fax (512) 471-3509 <http://ctl.utexas.edu/>

The University of Texas at Austin  
CTL - Student Testing Services  
P O Box 7246  
Austin TX 78713-7246

### **Registration Information**

Registration, MAI 1, (512) 475-7656, fax (512) 475-7515 <http://registrar.utexas.edu/students/registration/>

The University of Texas at Austin  
Office of the Registrar  
Registration  
P O Box 7216  
Austin TX 78713-7216

### **Services for Students with Disabilities**

Division of Diversity and Community Engagement, SSB 4.104, (512) 471-6259, video phone (866) 329-3986, fax (512) 475-7730 <http://www.utexas.edu/diversity/ddce/ssd/>

The University of Texas at Austin  
Division of Diversity and  
Community Engagement  
Services for Students  
with Disabilities  
100 West Dean Keeton Street  
Stop A5800  
Austin TX 78712-1100

### **Transcripts**

Office of the Registrar, MAI 1, (512) 475-7689, fax (512) 475-7515 <http://registrar.utexas.edu/students/transcripts/>

The University of Texas at Austin  
Office of the Registrar  
Transcript Services  
P O Box 7216  
Austin TX 78713-7216

### **TSI**

Texas Success Initiative, CRD 23, 2501 Whitis Ave, (512) 232-7146, fax (512) 471-6464 <http://www.utexas.edu/ugs/tsi/>

The University of Texas at Austin  
TSI Office  
2501 Whitis Ave  
Stop F6000  
Austin TX 78705-1715

# The University

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## Statement on Equal Educational Opportunity

The University of Texas at Austin is committed to an educational and working environment that provides equal opportunity to all members of the University community. In accordance with federal and state law, the University prohibits unlawful discrimination, including harassment, on the basis of race; color; religion; national origin; gender, including sexual harassment; age; disability; citizenship; and veteran status. Discrimination on the basis of sexual orientation, gender identity, and gender expression is also prohibited pursuant to University policy. Any member of the University community who feels he or she has been subject to discrimination, harassment, or retaliation should contact the Office of Institutional Equity in person at NOA 4.302, Austin TX 78713; via e-mail at [oi@atx.utexas.edu](mailto:oi@atx.utexas.edu); or by phone at (512) 471-1849.

## Accreditation

The University of Texas at Austin is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award bachelor's, master's, first-professional, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur GA 30033-4097 or call (404) 679-4500 for questions about the accreditation of the University of Texas at Austin.

## The University of Texas at Austin

The University of Texas was established by the state legislature in 1881; by popular vote, the Main University was located at Austin and the Medical Branch at Galveston. The Austin campus was opened in September, 1883, with a faculty of 8 and a student body of 218; about three-quarters of the students were registered in the Academic Department and the remainder in the Law Department. In the intervening decades, the central campus has grown from 40 to more than 360 acres, while the student body has increased to about 39,000 undergraduates and 11,000 graduate students. In 1967, with the creation of The University of Texas System, the name of the Main University was changed to the University of Texas at Austin.

University students represent both the diverse population of the state and the full range of contemporary scholarship: an undergraduate may choose courses from more than 200 fields of study while pursuing any of more than 150 majors. Undergraduate study is supported by extensive computer facilities and by one of the largest academic libraries in the nation. Students also benefit from the broad range of scholarly and technical research conducted by the faculty and the research staff.

The city of Austin, with a population of about 1.8 million, is a relaxed and cosmopolitan setting for the University. The city is home to respected professional communities in theatre, dance, the visual arts, and classical and popular music that offer a wide range of cultural events. Students may also take part in recreational activities made possible by the temperate climate and Austin's location in the Hill Country of central Texas.

For further historical and current information about the University, see *General Information* (<http://registrar.utexas.edu/catalogs/general-information>).

## The University of Texas System

The University of Texas at Austin is the largest component of The University of Texas System. The system is governed by a nine-member Board of Regents appointed by the governor with the advice and consent of the state Senate. In addition to the University, the system consists of the following institutions. Information about the system and its components is published at <http://www.utsystem.edu/>.

- The University of Texas at Arlington
- The University of Texas at Brownsville
- The University of Texas at Dallas
- The University of Texas at El Paso
- The University of Texas - Pan American
- The University of Texas of the Permian Basin
- The University of Texas at San Antonio
- The University of Texas at Tyler
- The University of Texas Southwestern Medical Center at Dallas
- The University of Texas Medical Branch at Galveston
- The University of Texas Health Science Center at Houston
- The University of Texas Health Science Center at San Antonio
- The University of Texas M. D. Anderson Cancer Center
- The University of Texas Health Science Center at Tyler

## Organization of the University

### Academic Affairs

Subject to the supervision of the Board of Regents and to the authority the board has vested in administrative officers, the General Faculty is responsible for the governance of the University. The president is the chief executive officer; the executive vice president and provost is the chief academic officer. The administration of each college or school is the responsibility of that division's dean; in most colleges and schools, an associate or assistant dean for academic affairs oversees the day-to-day academic life of the division. Several colleges are further divided into departments and academic centers; academic and administrative matters in these units are the responsibility of the department chair or center director. A list of the University's colleges and schools and their constituent departments and academic centers is given in *General Information* (<http://catalog.utexas.edu/general-information>).

### Student Services

Student services are provided by the Division of Student Affairs, under the direction of the vice president for student affairs. The division consists of several units, which administer the University's programs in such areas as financial aid, student record management, counseling and learning support, housing and food, recreation, health services, and student media. The services of these units are described in *General Information* (<http://catalog.utexas.edu/general-information>). Services provided by the colleges and schools are described in the college/school sections of this catalog.

## Undergraduate Degrees

The University offers the following undergraduate degrees.

Bachelor of Architecture	BArch
Bachelor of Arts	BA
Bachelor of Arts in Art	BAArt
Bachelor of Arts in Geological Sciences	BAGeoSci
Bachelor of Arts in Music	BAMusic
Bachelor of Arts in Theatre and Dance	BATD
Bachelor of Business Administration	BBA
Bachelor of Fine Arts	BFA
Bachelor of Journalism	BJ
Bachelor of Music	BMusic
Bachelor of Science in Advertising	BSAdv
Bachelor of Science in Aerospace Engineering	BSAse
Bachelor of Science in Applied Learning and Development	BSALD
Bachelor of Science in Architectural Engineering	BSArchE
Bachelor of Science in Architectural Studies	BSArchStds
Bachelor of Science in Astronomy	BSAst
Bachelor of Science in Athletic Training	BSAthITrng
Bachelor of Science in Biochemistry	BSBioch
Bachelor of Science in Biology	BSBio
Bachelor of Science in Biomedical Engineering	BSBiomedE
Bachelor of Science in Chemical Engineering	BSChE
Bachelor of Science in Chemistry	BSCh
Bachelor of Science in Civil Engineering	BSCE
Bachelor of Science in Communication Sciences and Disorders	BSCSD
Bachelor of Science in Communication Studies	BSCommStds
Bachelor of Science in Computer Science	BSCS
Bachelor of Science in Electrical Engineering	BSEE
Bachelor of Science in Environmental Science	BSEnviroSci
Bachelor of Science in Geological Sciences	BSGeoSci
Bachelor of Science in Geosystems Engineering and Hydrogeology	BSGEH
Bachelor of Science in Human Development and Family Sciences	BSHDFS
Bachelor of Science in Interdisciplinary Science	BSIntrdscSci
Bachelor of Science in Interior Design	BSID
Bachelor of Science in Kinesiology and Health	BSKinHealth
Bachelor of Science in Mathematics	BSMath
Bachelor of Science in Mechanical Engineering	BSME
Bachelor of Science in Medical Laboratory Science	BSMedLabSci
Bachelor of Science in Neuroscience	BSNeurosci
Bachelor of Science in Nursing	BSN
Bachelor of Science in Nutrition	BSNtr
Bachelor of Science in Petroleum Engineering	BSPE
Bachelor of Science in Physics	BSPhy
Bachelor of Science in Psychology	BSPsy
Bachelor of Science in Public Health	BSPublicHealth
Bachelor of Science in Public Relations	BSPR
Bachelor of Science in Radio-Television-Film	BSRTF
Bachelor of Science in Textiles and Apparel	BSTA

Bachelor of Social Work	BSW
Doctor of Pharmacy	PharmD

## School of Architecture

Architectural studies	BSArchStds
Architecture	BArch
Interior design	BSID

## Red McCombs School of Business

Business Honors Program	BBA
Department of Accounting	
Accounting	BBA
Integrated approach	BBA and MPA
Department of Finance	
Finance	BBA
Department of Information, Risk, and Operations Management	
Management information systems	BBA
Science and technology management	BBA
Supply chain management	BBA
Department of Management Management	
Management	BBA
Department of Marketing	
International business	BBA
Marketing	BBA

## College of Communication

Department of Advertising	
Advertising	BSAdv
Public relations	BSPR
Department of Communication Sciences and Disorders	
Communication sciences and disorders	BSCSD
Department of Communication Studies	
Communication studies	BSCommStds
School of Journalism	
Journalism	BJ
Department of Radio-Television-Film	
Radio-television-film	BSRTF

## College of Education

All-level generic special education	BSALD
Early childhood through grade six generalist	BSALD
Youth and community studies	BSALD
Department of Kinesiology and Health Education	
Applied movement science	BSKinHealth

Athletic training	BSAthTrng
Exercise science	BSKinHealth
Health promotion	BSKinHealth
Physical culture and sports	BSKinHealth
Sport management	BSKinHealth

Theatre and dance	BATD
Theatre studies	BFA

## John A. and Katherine G. Jackson School of Geosciences

Department of Geological Sciences	
Geological sciences	BAGeoSci, BSEnviroSci
Geological sciences	
Option I: General geology	BSGeoSci
Option II: Geophysics	BSGeoSci
Option III: Hydrogeology	BSGeoSci
Option IV: Environmental science and sustainability	BSGeoSci
Option V: Teaching	BSGeoSci
Geosystems engineering (offered jointly by the Department of Petroleum and Geosystems)	BSGEH

## College of Liberal Arts

Humanities	BA
International relations and global studies	BA
Department of African and African Diaspora Studies	
African and African diaspora studies	BA
Department of American Studies	
American studies	BA
Department of Anthropology	
Anthropology	BA
Center for Asian American Studies	
Ethnic studies (Students majoring in ethnic studies concentrate in Asian American studies or Mexican American studies.)	BA
Department of Asian Studies	
Asian cultures and languages (Students specialize in Chinese, Hindi/Urdu, Japanese, Korean, Malayalam, Sanskrit, or Tamil.)	BA
Asian studies	BA
Department of Classics	
Ancient history and classical civilization	BA
Classical archaeology	BA
Classics	BA
Latin	BA
Department of Economics	
Economics	BA
Department of English	
English	BA
Center for European Studies	
European studies	BA
Department of French and Italian	
French	BA
Italian	BA
Department of Geography and the Environment	

## Cockrell School of Engineering

Department of Aerospace Engineering and Engineering Mechanics	
Aerospace engineering	BSAsE
Department of Biomedical Engineering	
Biomedical engineering	BSBiomedE
Department of Chemical Engineering	
Chemical engineering	BSChE
Department of Civil, Architectural, and Environmental Engineering	
Architectural engineering	BSArchE
Civil engineering	BSCE
Department of Electrical and Computer Engineering	
Electrical engineering	BSEE
Department of Mechanical Engineering	
Mechanical engineering	BSME
Department of Petroleum and Geosystems Engineering	
Petroleum engineering	BSPE
Geosystems engineering and hydrogeology (offered jointly by the Department of Petroleum and Geosystems Engineering and the Jackson School of Geosciences)	BSGEH

## College of Fine Arts

Department of Art and Art History	
Art history	BAArt
Design	BFA
Studio art	BAArt, BFA
Visual art studies	BFA
Sarah and Ernest Butler School of Music	
Composition	BMusic
Jazz composition	BMusic
Jazz performance (Students may major in double bass, drum set, guitar, piano, saxophone, trombone, trumpet, or vibraphone.)	BMusic
Music	BAMusic
Music business	BAMusic
Music studies	BMusic
Performance (Students may major in voice, piano, organ, harpsichord, harp, or one of the orchestral instruments, including euphonium, guitar, and saxophone.)	BMusic
Recording technology	BAMusic
Department of Theatre and Dance	
Dance	BFA

Geographical sciences	BSEnviroSci
Geography	BA
Urban studies	BA
Department of Germanic Studies	
German	BA
Scandinavian studies	BA
Department of Government	
Government	BA
Department of History	
History	BA
Schusterman Center for Jewish Studies	
Jewish studies	BA
Teresa Lozano Long Institute of Latin American Studies	
Latin American studies	BA
Department of Linguistics	
Linguistics	BA
Center for Mexican American Studies	
Ethnic studies (Students majoring in ethnic studies concentrate in Asian American studies or Mexican American studies.)	BA
Center for Middle Eastern Studies	
Middle Eastern Studies	BA
Department of Middle Eastern Studies	
Islamic studies	BA
Middle Eastern languages and cultures	BA
Department of Philosophy	
Philosophy	BA
Plan II Honors Program	
Plan II	BA
Department of Psychology	
Psychology	BA, BSPsy
Department of Religious Studies	
Religious studies	BA
Department of Rhetoric and Writing	
Rhetoric and writing	BA
Center for Russian, East European, and Eurasian Studies	
Russian, East European, and Eurasian studies	BA
Department of Sociology	
Sociology	BA
Department of Spanish and Portuguese	
Portuguese	BA
Spanish	BA
Center for Women's and Gender Studies	
Women's and gender studies	BA

## College of Natural Sciences

Interdisciplinary science	
Option I: Middle grades teaching in mathematics and science	BSIntrdscSci
Department of Astronomy	
Astronomy	BA

Astronomy	
Option I: Astronomy	BSAst
Option II: Astronomy honors	BSAst
School of Biological Sciences	
Biological sciences	
Option I: Biological sciences	BSEnviroSci
Option II: Biological sciences honors	BSEnviroSci
Biology	BA
Biology	
Option I: Ecology, evolution, and behavior	BSBio
Option II: Human biology	BSBio
Option III: Marine and freshwater biology	BSBio
Option IV: Microbiology and infectious diseases	BSBio
Option V: Cell and molecular biology	BSBio
Option VI: Neurobiology	BSBio
Option VII: Plant biology	BSBio
Option VIII: Teaching	BSBio
Option IX: Biology honors	BSBio
Option X: Computational biology	BSBio
Medical laboratory science	BSMedLabSci
Neuroscience	BSNeurosci
Public health	
Option I: Public health	BSPublicHealth
Option II: Public health honors	BSPublicHealth
Option III: Advanced program	BSPublicHealth
Department of Chemistry and Biochemistry	
Biochemistry	BA
Biochemistry	
Option I: Biochemistry	BSBioch
Option II: Systems and synthetic biology	BSBioch
Option III: Biochemistry honors	BSBioch
Chemistry	BA
Chemistry	
Option I: Chemistry	BSCh
Option II: Computation	BSCh
Option III: Teaching	BSCh
Option IV: Chemistry honors	BSCh
Department of Computer Science	
Computer science	BA
Computer science	
Option I: Computer science	BSCS
Option II: Turing Scholars honors	BSCS
Option III: Computer science honors	BSCS
Option IV: Integrated approach	BSCS and MSCS
Option V: Teaching (senior grades)	BSCS
School of Human Ecology	
Human ecology	BA
Textiles and apparel	
Option I: Apparel design and conservation	BSTA
Option II: Retail merchandising	BSTA
Option III: Textiles and apparel honors	BSTA
Department of Human Development and Family Sciences	
Human development and family sciences	



Option I: Early childhood	BSHDFS
Option II: Human development	BSHDFS
Option III: Families and personal relationships	BSHDFS
Option IV: Families and society	BSHDFS
Option V: Human development and family sciences honors	BSHDFS
Option VI: Honors in advanced human development and family sciences	BSHDFS
Department of Nutritional Sciences	
Nutrition	
Option I: Dietetics	BSNtr
Option II: Nutritional sciences	BSNtr
Option III: Nutrition in business	BSNtr
Option IV: Honors in advanced nutritional sciences	BSNtr
Option V: Nutrition honors	BSNtr
Option VI: International nutrition	BSNtr
Department of Mathematics	
Mathematics	
Option I: Actuarial science	BSMath
Option II: Applied mathematics	BSMath
Option III: Mathematical sciences	BSMath
Option IV: Pure mathematics	BSMath
Option V: Teaching	BSMath
Option VI: Mathematics honors	BSMath
Department of Physics	
Physics	
Option I: Physics	BSPhy
Option II: Computation	BSPhy
Option III: Radiation physics	BSPhy
Option IV: Space sciences	BSPhy
Option V: Teaching	BSPhy
Option VI: Physics honors	BSPhy
Option VII: Biophysics	BSPhy

## School of Nursing

Nursing	BSN
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## College of Pharmacy

Pharmacy	PharmD
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## School of Social Work

Social Work	BSW
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## Simultaneous Majors

With proper approval, an undergraduate may pursue two majors simultaneously. The two majors may lead either to a single degree or

to two degrees. For example, a student who majors simultaneously in history and government is awarded a single Bachelor of Arts degree; a student who majors simultaneously in journalism and government receives the Bachelor of Journalism and the Bachelor of Arts.

The student is admitted to the University with a single major. He or she may choose a second major after completing thirty semester hours of coursework in residence at the University. The student must follow any application procedures and meet any admission requirements that have been established for the second major; information about these and other relevant college policies is available from the dean.

Students with simultaneous majors must pay all applicable major-related fees for both fields, and they have the right to use the advising and student services provided by both colleges. Decisions about admission to programs, honors, scholastic probation, and dismissal are based independently on the criteria for each major.

A student who chooses to pursue two majors simultaneously is expected to take responsibility for his or her educational development. The student must know and abide by all policies of each of the colleges in which he or she is enrolled. The student must also know and meet the requirements of both degree programs, enroll in courses appropriate to both, meet prerequisites and take courses in the proper sequence, and seek advice from both colleges about degree requirements and other University policies when necessary.

## Interdisciplinary Opportunities

Several of the majors listed in the section "Degree Programs" above are interdisciplinary in nature. The Bachelor of Science in Biomedical Engineering, for example, is offered by the Cockrell School of Engineering but involves substantial coursework in the life and physical sciences; in the various area studies programs in the College of Liberal Arts, such as Latin American studies and Middle Eastern studies, students examine a geographic area from the viewpoints of several traditional disciplines.

In addition to interdisciplinary majors, the simultaneous major option described above, and the formal dual degree programs described later in this catalog, the University provides various ways for students to add breadth and diversity to their studies. These include the transcript-recognized certificate programs listed below; other concentrations, not reflected on the graduate's transcript, are described in the later chapters of this catalog. The Study Abroad program, described in *General Information* (<http://catalog.utexas.edu/general-information>), allows students to consider their own field from the unique viewpoint of another culture. The Bridging Disciplines Programs and other initiatives of the School of Undergraduate Studies help students traverse the traditional boundaries between colleges and disciplines.

Cross-disciplinary initiatives of the colleges and schools are often described on their Web sites, which may be reached via <http://www.utexas.edu/dept/>.

## Transcript-Recognized Certificate Programs

Transcript-recognized certificate programs offer interdisciplinary curricula that support and extend a student's major. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree

receive recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine hours of certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University.

A student may not earn a certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

Each of the following transcript-recognized certificate programs is described in the catalog section for the college that sponsors it. Certificate programs that do not lead to transcript recognition are also described in the following sections of this catalog.

- School of Undergraduate Studies
  - Bridging Disciplines Programs (see Degrees and Programs (p. 25))
  
- McCombs School of Business
  - Business Foundations
  - Real Estate
  - Supply Logistics Optimization (see Degrees and Programs (p. 52))
  
- College of Communication
  - Sports Media
  - US Latino and Latin American Media Studies (see Academic Policies and Procedures (p. 76))
  
- College of Liberal Arts
  - Core Texts and Ideas
  - Indigenous Studies
  - Texas Interdisciplinary Plan (see Degrees and Programs (p. 295))
  
- College of Natural Sciences
  - Elements of Computing
  - Scientific Computation
  - Texas Interdisciplinary Plan
  - Textile Conservation (see Degrees and Programs (p. 485))

computer. Steady growth in computer capabilities, and enormous expansion in the scope and sophistication of computational modeling and simulation, have added computation as the third pillar of scientific discovery and have revolutionized engineering practice. Computational science and engineering can affect virtually every aspect of human existence, including the health, security, productivity, and competitiveness of nations.

The Computational Science and Engineering Certificate program is sponsored by the Cockrell School of Engineering, the Jackson School of Geosciences, the College of Liberal Arts, and the College of Natural Sciences; it is administered by the Institute for Computational Engineering and Sciences (ICES). The program offers highly qualified upper-division students an opportunity for in-depth study and research in computational science and engineering, including computational and applied mathematics, numerical simulation, scientific computation, and visualization. A student who completes the general requirements above and the specific requirements below receives recognition on his or her University transcript and a letter from the director of ICES that describes the program and the work completed. Along with supporting letters from supervising faculty and graduate mentors, these are valuable assets for students applying to graduate school and pursuing competitive job opportunities.

To apply for admission, students must have completed sixty semester hours of coursework and must have a grade point average of at least 3.00. Students are expected to have broad training in quantitative methods, comparable to that provided by Mathematics 408D or 408M, Computer Science 303E or Statistics and Scientific Computation 222, Mathematics 427K, and Mathematics 340L.

Students must complete the following eighteen semester hours of coursework with a grade of at least B in each course:

1. Three semester hours in numerical computing chosen from the following: Computer Science 323E, 323H, 367, Mathematics 348.
2. Three semester hours in numerical applications chosen from the following: Aerospace Engineering 347, Biology 337J, Biomedical Engineering 341, 342, 346, Chemical Engineering 348, Economics 363C, Geological Sciences 325K, Mathematics 374M, Mechanical Engineering 369L, Physics 329, Statistics and Scientific Computation 339.
3. Nine semester hours chosen from the following: Computer Science 377, Engineering Mechanics 360, Mathematics 346, 368K, 372K, 376C, Statistics and Scientific Computation 374C, 374E.
4. A scientific computing project supervised by a member of the computational science, engineering, and mathematics (CSEM) graduate program faculty. The research project is completed in a three-semester-hour research methods or individual instruction course, which the student should take during the senior year. The research project may include mentoring by ICES postdoctoral fellows and CSEM graduate students as part of a vertical instructional research team.

With the approval of the certificate program's faculty adviser, course substitutions may be made within the broad area of computational science and engineering.

More information about the certificate is available at <http://www.ices.utexas.edu/programs/cse-certificate/> and in the Institute for Computational Engineering and Sciences, ACE 4.110

## Certificate in Computational Science and Engineering

The foundations of science and engineering are under rapid, dramatic, and irreversible change brought on by the advent of the



## Preparation for Health Professions

The rapid expansion and diversification of services designed to meet the health needs of society provide students with a variety of career opportunities in health care. However, since competition for admission to professional school programs is keen, it is important to maintain a strong academic record.

### Advisory Services

Students interested in a health career should contact Health Professions Advising, PAI 5.03, for course and career advising designed to prepare them for admission to professional schools. Health Professions Advising maintains a Web page, a reference collection of information on health careers, and an e-mail distribution list. The office sponsors a lecture series, an annual Health Professions Fair, and other programs.

In general, professional schools do not indicate a preferred undergraduate major, leaving the student free to choose a degree program suited to his or her interests and abilities. The student should complete minimum professional school course requirements before taking a nationally standardized admission test such as the Dental Admission Test, Medical College Admission Test, Pharmacy College Admission Test, or Graduate Record Examinations. Health Professions Advising provides guidance concerning courses that meet professional school admission requirements; advising for degree requirements is available in the student's major department. Students are encouraged to register using the special advising area code appropriate to the health career they are pursuing.

A student planning to pursue a degree in dietetics, medical laboratory science, nursing, or public health at the University should consult an adviser in the appropriate department or school.

### Transfer of Professional School Coursework Toward an Undergraduate Degree

All students preparing for graduate health professions schools should plan to complete a bachelor's degree in the field of their choice before entering professional school, since the number of students admitted without a degree is small. Most professional pharmacy programs, including those in Texas, do not require a bachelor's degree for admission.

If a preprofessional student undertakes work leading to an established undergraduate degree in the College of Liberal Arts or the College of Natural Sciences but is accepted into the professional school before finishing the degree, it may be possible by special petition for the student to use professional school coursework toward the degree as transfer hours. In this instance, to graduate the student must meet, without exception, all requirements for the degree. If the petition is approved, limited transfer of unspecified upper-division credit in chemistry and biology is allowed as applicable and necessary to the degree.

In a few cases in which a bachelor's degree is not required to enroll in a professional program, a student who completes his or her studies at a University of Texas System school of health professions may be either eligible or required to receive a bachelor's degree jointly awarded by UT Austin and the health professions school. If a student

has received an undergraduate or graduate degree from a UT System general academic institution before enrolling at a UT System health science center to pursue a second bachelor's degree, the health science center awards the second degree. For more information, students should contact their college's advising office.

### Applying to Professional School

The Health Professions Advising Web site, <http://cns.utexas.edu/careers/health-professions/>, lists the minimum admission requirements for most dental, medical, occupational therapy, optometry, pharmacy, physical therapy, physician assistant, and veterinary programs in the state. Articles of current interest, admission statistics, and information on application procedures are available for reference in Health Professions Advising.

All applicants to health professions programs should consult the schools' Web sites and catalogs as well as the most recent editions of admissions guides such as *Admissions Requirements of United States and Canadian Dental Schools*, *Medical School Admission Requirements*, *Veterinary Medical School Admission Requirements*, and *Pharmacy School Admission Requirements*. These publications are available in the Health Professions Advising resource library.

## Preparation for Law

There is no sequential arrangement of courses prescribed for a prelaw program, nor is any particular major specified. For answers to specific questions about a prelaw program, the student should consult the prelaw adviser in his or her major department.

Services for prelaw students in the College of Liberal Arts are provided by Liberal Arts Career Services (LACS), Peter T. Flawn Academic Center 18. These include the annual fall law fair, information on how to research law schools, and assistance with the application procedure, including the personal statement. Prelaw students in all majors may consult the prelaw adviser in LACS. Additional information about preparation for law is available at <http://www.utexas.edu/cola/orgs/lacs/Students/PL-GS/PreLaw.php>.

Information about admission to the School of Law at the University is given in *General Information* and in the *Law School Catalog* (<http://registrar.utexas.edu/catalogs/law-school>). Like most professional schools, the University's law school has a number of specific requirements and limitations. For example, the applicant must have completed a bachelor's degree. Students are admitted only at the beginning of the fall semester. Each applicant for admission must take the Law School Admission Test, administered by the Law School Admission Council. This is usually taken by December of the senior year. The applicant's test score and undergraduate academic performance are important in determining eligibility for admission to law school; but all law schools consider a variety of factors in their admission policies, and no single factor by itself will guarantee admission or denial.

## Preparation for Teacher Certification

Students who plan to teach in the early grades in Texas public schools must earn the Bachelor of Science in Applied Learning

and Development in the College of Education and must meet the appropriate state certification requirements.

Students who plan to teach in Texas public middle schools or high schools must earn a bachelor's degree in the field they intend to teach and must meet the requirements for teacher certification. Students pursuing either middle grades or secondary math or science certification must follow the curriculum prescribed by the UTeach-Natural Sciences program. Students pursuing either middle grades or secondary certification in English language arts, social studies, or languages other than English must follow the curriculum prescribed by the UTeach-Liberal Arts program. Students pursuing other areas of certification should consult an adviser in the major department about degree requirements and an adviser in the College of Education about certification requirements.

## Coursework in the Graduate School and the School of Law

### Graduate Work for Undergraduate Credit

An undergraduate may enroll in a graduate course under the following conditions:

1. He or she must be an upper-division student and must fulfill the prerequisite for the course (except graduate standing).
2. He or she must have a University grade point average of at least 3.00.
3. He or she must receive the consent of the instructor of the course and of the graduate adviser for the field in which the course is offered. Some colleges and schools may also require the approval of the dean's office. Individual divisions may impose additional requirements or bar undergraduates from enrolling in graduate courses.
4. Students in most colleges must have their dean's approval before they register for a graduate course.

Undergraduate students may not enroll in graduate courses that have fewer than five graduate students enrolled.

A graduate course taken by an undergraduate is counted toward the student's bachelor's degree in the same way that upper-division courses are counted, unless the course is reserved for graduate credit as described in the next section. Courses reserved for graduate credit may not also be used to fulfill the requirements of an undergraduate degree.

An undergraduate student enrolled in a graduate course is subject to all University regulations affecting undergraduates.

### Reservation of Work by Undergraduates for Graduate Credit

Under the following conditions, a degree-seeking undergraduate may enroll in a graduate course and reserve that course for credit toward a graduate degree.

1. The student must have a University grade point average of at least 3.00.
2. The student must have completed at least ninety semester hours of coursework toward an undergraduate degree.

3. The student may not register for more than fifteen semester hours in the semester or for more than twelve semester hours in the summer session in which the course is reserved.
4. No more than twelve semester hours may be reserved for graduate credit.
5. All courses reserved for graduate credit must be approved by the twelfth class day of the semester or the fourth class day of the summer session by the course instructor, the student's undergraduate adviser, the graduate adviser in the student's proposed graduate major area, the dean of the student's undergraduate college, and the graduate dean. A form for this purpose is available in the Office of Graduate Studies.

An undergraduate student enrolled in a graduate course is subject to all University regulations affecting undergraduates.

A student who reserves courses for graduate credit must be admitted to a University graduate program through regular channels before the credit may be applied toward a graduate degree. By allowing the student to earn graduate credit while still an undergraduate, the University makes no guarantee of the student's admissibility to any graduate program.

### Courses in the School of Law

Undergraduate students may not take courses in the School of Law.

## Honors

Honors programs and organizations are described in college/school sections of this catalog; the programs of the University Honors Center (<http://www.utexas.edu/ugs/uhc>) are described in the School of Undergraduate Studies (p. 24) section. *General Information* gives the requirements for recognition as a College Scholar or Distinguished College Scholar, inclusion on the University Honors list, and graduation with University honors.

## Academic Advising

The University views sound academic advising as a significant responsibility in educating students. Academic advisers assist students in developing intellectual potential and exploring educational opportunities and life goals. Many people in the campus community contribute to the advising process, including faculty, staff, student, and professional advisers. Through the relationship established between adviser and student within a friendly, helpful, and professional atmosphere, a student has the opportunity to learn about educational options, degree requirements, and academic policies and procedures; to clarify educational objectives; to plan and pursue programs consistent with abilities, interests, and life goals; and to use all resources of the University to best advantage.

Ultimately, the student is responsible for seeking adequate academic advice, for knowing and meeting degree requirements, and for enrolling in appropriate courses to ensure orderly and timely progress toward a degree. Frequent adviser contact provides students with current academic information and promotes progress toward educational goals. The University supports that progress and encourages effective academic advising campus-wide.

The advising systems are described in the college/school sections of this catalog.

## Student Responsibility

While University faculty and staff members give students academic advice and assistance, each student is expected to take responsibility for his or her education and personal development. The student must know and abide by the academic and disciplinary policies given in this catalog and in *General Information* (<http://catalog.utexas.edu/general-information>), including rules governing quantity of work, the standard of work required to continue in the University, scholastic probation and dismissal, and enforced withdrawal. The student must also know and meet the requirements of his or her degree program, including the University's basic education requirements; must enroll in courses appropriate to the program; must meet prerequisites and take courses in the proper sequence to ensure orderly and timely progress; and must seek advice about degree requirements and other University policies when necessary.

The student must give correct local and permanent postal addresses, telephone numbers, and e-mail address to the Office of the Registrar and to the offices of the student's deans and must notify these offices immediately of any changes. Official correspondence is sent to the postal or e-mail address last given to the registrar; if the student has failed to correct this address, he or she will not be relieved of responsibility on the grounds that the correspondence was not delivered.

The student must verify his or her schedule of classes each semester, must see that necessary corrections are made, and must keep documentation of all schedule changes and other transactions.

All students should be familiar with the following sources of information:

## The University Catalog

The catalog of the University is the document of authority for all students. Any academic unit may issue additional or more specific information that is consistent with approved policy. However, the information in the catalog supersedes that issued by any other unit if there is a conflict between the two. The University reserves the right to change the requirements given in the catalog at any time.

The catalog consists of four issues: the *Undergraduate Catalog*, the *Graduate Catalog*, the *Law School Catalog*, and *General Information*. Each issue is published online by the Office of the Registrar at <http://registrar.utexas.edu/catalogs/>.

The *Undergraduate Catalog* is published in August of even-numbered years; the *Graduate Catalog* is published in August of odd-numbered years; the *Law School Catalog* is published in February of even numbered years. These issues contain regulations and degree requirements that apply to undergraduates, graduate students, and students in the School of Law. Regulations are valid only for the two academic years indicated by the dates in the title of each publication; for an explanation of the period for which degree requirements are valid, see the section "Graduation under a Particular Catalog" in each issue. The lists of available course offerings for each academic unit are correct at the time of publication but are subject to change. They are superseded by course offerings published each semester and summer session in the *Course Schedule*.

*General Information*, published every August, contains current and historical information about the University's organization and physical facilities. It gives important information about academic policies and procedures that apply to all students for the academic year indicated in title of the publication. It includes the official academic calendar,

admission procedures and residence requirements, information about tuition and fees, and policies on quantity of work, grades and the grade point average, credit by examination and correspondence, adding and dropping courses, withdrawal from the University, and scholastic probation and dismissal. *General Information* is meant to be used along with each of the other issues; each student must be familiar with the regulations given there and with those given in the issue that covers his or her degree program.

Assistance in obtaining information about the University—including costs, refund policies, withdrawal, academic programs, the faculty, accreditation, and facilities and services for disabled persons—is available from V. Shelby Stanfield, Vice Provost and Registrar, at (512) 475-7510 and at The University of Texas at Austin, Office of the Registrar, P O Box 7216, Austin TX 78713-7216.

## The Course Schedule

The *Course Schedule* is published by the Office of the Registrar and is available before registration for each semester and summer session at <http://registrar.utexas.edu/schedules/>. It includes information about registration procedures; times, locations, instructors, prerequisites, and special fees of classes offered; and advising locations.

## Dean's Offices

In each college, the office of the assistant or associate dean for student affairs serves as a central source of information about academic affairs and student services. The student should consult the dean's office staff for information not provided in the publications listed above; a student who is in doubt about any University regulation should always seek clarification in the dean's office before proceeding.

## Graduation

The University holds commencement exercises at the end of the spring semester. Each college and school also holds a commencement ceremony in the spring, and many hold graduation exercises in the fall. Graduating students are encouraged to participate. Those who graduate in the summer or fall may attend Commencement the following spring. Each student should consult his or her dean early in the semester of graduation for information about commencement activities and procedures.

No degree will be conferred except on publicly announced dates.

## General Requirements

To receive an undergraduate degree from the University of Texas at Austin, a student must fulfill the Core Curriculum (p. 22) requirements and all requirements for the degree as set forth in a catalog under which he or she is eligible to graduate and any special requirements of the college or school and department offering the degree, as well as the following minimum general requirements:

1. The student must have a grade point average of at least 2.00 on all courses undertaken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded. Additional requirements imposed by a college or school, if any, are given in the college's chapter of this catalog.

2. The student must fulfill the following requirements regarding coursework taken in residence. Residence credit includes only courses taken at the University of Texas at Austin; it does not include credit by examination, courses taken by extension or correspondence, and online courses that are recorded as transfer credit. Coursework in University-approved affiliated study abroad programs (international provider programs) is treated as residence credit for requirements 2a and 2b below. However, coursework in University-approved affiliated study abroad programs may not be used to fulfill requirement 2c.
  - A. The student must complete in residence at least sixty semester hours of coursework counted toward the degree. (This requirement is waived for students in the Accelerated Track for the Bachelor of Science in Nursing, a degree program for registered nurses who hold associate's degrees or diplomas in nursing.)
  - B. Twenty-four of the last thirty semester hours counted toward the degree must be completed in residence.
  - C. At least six semester hours of advanced coursework in the major must be completed in residence.

Additional requirements imposed by a college or school, if any, are given in the college/school sections of this catalog. Many degree plans include residence rules in addition to the above University-wide requirements; the appropriate academic units have the discretion to determine applicability of University-approved affiliated study abroad credit toward all college- and school-specific requirements for coursework in residence. Course equivalency and University approval of study abroad courses are determined by the appropriate academic units.

3. Coursework in American government and American history (the legislative requirement):

- A. Each student must complete six semester hours of coursework in American government, including Texas government. Because these courses are not electives, they may not be taken on the pass/fail basis at the University. Credit by examination may be counted toward the requirement.

The six hours of coursework used to fulfill the requirement must cover both the United States and the Texas constitutions. Texas colleges and universities differ in the way they include this material in the courses they offer. As a result, some combinations of government courses taken at different institutions do not fulfill the requirement, even though they provide six hours of credit. The following combinations of coursework, some of which include transferred work, fulfill the government requirement at the University:

- i Government 310L and 312L
- ii Government 310L and three hours of transfer credit in United States government (entered into the student's University record as "GOV 3 US")
- iii Government 310L and three hours of transfer credit in Texas government ("GOV 3 TX")
- iv Three hours of transfer credit in United States government ("GOV 3 US") and three hours of transfer credit in Texas government ("GOV 3 TX")

A number of sections of Government 312L are offered each semester. Because some of these sections deal with state government and some deal with federal government, credit for Government 312L in combination with transfer credit in United States government ("GOV 3 US") or in Texas government ("GOV 3 TX") may fail to fulfill the legislative requirement. If a student has such a combination of credit, his or her dean's office will evaluate the coursework to determine whether both the state and the federal components of the requirement have been met.

- B. Each student must complete six semester hours of coursework in American history. Up to three hours in Texas history may be counted toward this requirement. Because these courses are not electives, they may not be taken on the pass/fail basis at the University. Credit by examination may be counted toward the requirement.

ROTC courses may not be counted toward the legislative requirement in history or government. Policies about the use of ROTC courses are given in each of the college/school sections of this catalog.

4. A candidate for a degree must be registered at the University either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar. Some colleges require that their students be registered in that college the semester of graduation; these rules are given in the college/school sections of this catalog.

## Multiple Degrees

No second bachelor's degree will be conferred until the candidate has completed at least twenty-four semester hours in addition to those counted toward the bachelor's degree that requires the higher number of hours of credit. The McCombs School of Business, the Cockrell School of Engineering, the College of Education, and the School of Nursing require the student to complete at least twenty-four hours in addition to those counted toward the first bachelor's degree.

A student may not receive more than one degree with the same title; for example, he or she may not earn more than one Bachelor of Arts degree.

## Graduation under a Particular Catalog

To receive a bachelor's degree, a student must fulfill all the degree requirements in a catalog under which he or she is eligible to graduate; the choices open to students in each college and school are explained below. The student must complete degree requirements within a specified time period; if he or she leaves school to enter military service during a national emergency, the time required to meet the military obligation is excluded from the time allowed for completion of the degree.



A student who transfers to the University from another Texas public institution of higher education has the same catalog choices that he or she would have had if the dates of attendance at the University had been the same as the dates of attendance at the other institution.

Since each college and school must retain the flexibility to improve its curriculum, course offerings may be changed during the student's education. If a course required under a previous catalog is no longer offered, students eligible to graduate according to that catalog should consult the dean of the college to learn whether another course may be used to fulfill the requirement.

## **Catalog Choices**

The catalog choices open to business, engineering, and pharmacy students are described below. In all other divisions, a student may graduate under the catalog covering any academic year in which he or she was enrolled at the University. Whichever catalog the student chooses, all degree requirements must be completed within six years (seven years for the Bachelor of Architecture) of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2012-2014 catalog must do so by the end of the summer session 2020 (2021 for the Bachelor of Architecture).

### **McCombs School of Business**

A business student may graduate under the catalog covering any academic year in which he or she was enrolled at the University. A business honors student who adds a second business major must graduate under the same catalog for both majors.

Whichever catalog the student chooses, all degree requirements must be completed within six years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2012-2014 catalog must do so by the end of the summer session 2020.

### **Cockrell School of Engineering**

An engineering student may graduate under the catalog covering any academic year in which he or she was enrolled in the school. Whichever catalog the student chooses, all degree requirements must be completed within six years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2012-2014 catalog must do so by the end of the summer session 2020.

Course substitutions in the degree program are permitted only with the approval of the departmental undergraduate adviser and the dean.

### **College of Pharmacy**

A pharmacy student may graduate under the catalog in effect immediately preceding the student's admission to the college or the catalog covering any academic year in which he or she was enrolled in the professional curriculum in the college. Whichever catalog they choose, students must complete all degree requirements within seven years of the end of the two-year period covered by that catalog. For example, a student who chooses to graduate according to the requirements in the 2012-2014 catalog must do so by the end of the summer session 2021.

# School of Undergraduate Studies

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Lawrence D. Abraham, EdD, *Interim Dean*  
Cassandre G. Alvarado, PhD, *Assistant Dean, Assessment & College Readiness*

Alan Constant, MA, *Assistant Dean, Academic Support*  
Jeanette M. Herman, PhD, *Assistant Dean, Academic Initiatives*  
David B. Spight, MA, *Assistant Dean, Strategic Advising & Career Counseling*  
<http://www.utexas.edu/ugs/>

## General Information

### Mission

The School of Undergraduate Studies oversees the components of a college education that are shared by all undergraduates at the University. The mission of the school includes the responsibility for sustaining a dynamic common curriculum and enriching the undergraduate experience through innovative advising, career counseling, academic assistance, learning communities, interdisciplinary programs, and undergraduate research. The overall functions of the school are organized as follows:

### Common Curriculum

- To instill in each student the distinctive traits of a University of Texas at Austin graduate and broadly educated person.
- To ensure a high-quality core curriculum by working closely with the other colleges and schools to set and enforce standards for the courses required of all undergraduate students.
- To develop and maintain innovative classes for first-year students.
- To set standards for and to evaluate courses that satisfy campus-wide requirements in writing and speaking, ethics and leadership, global cultures, cultural diversity, quantitative reasoning, and independent inquiry.
- To support ongoing curricular innovation and teaching excellence in these courses and throughout the undergraduate curriculum.

### Strategic Advising

- To offer advising services that help students find coherent paths through the University that suit their academic and career interests, focusing on students who are unsure of their majors or who are considering a change.
- To help students explore the resources of the University in areas that interest them.
- To provide training and resources for advisers from every college and school.

### Career Counseling

- To expand self-knowledge and workplace knowledge students need for making sound career choices.
- To guide students as they plan and prepare for graduate or professional school and the world of work.

## Academic Assistance

- To provide multiple avenues by which students can develop the ability to succeed academically.
- To help students improve performance inside and outside traditional classrooms.

## Learning Communities

- To support student success by cultivating community-based academic experiences, especially for first-year students.
- To foster leadership among students in these communities.

## Interdisciplinary Programs

- To create and coordinate interdisciplinary certificate and degree-granting programs, working closely with the other colleges and schools.
- To develop integrated strands of courses for satisfying campus-wide requirements.

## Undergraduate Research

- To foster undergraduate participation in the University's creative activity and research.

## Admission and Registration

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Students who wish to explore more than one field of study before choosing a major are encouraged to apply for admission to the School of Undergraduate Studies. Students who are not admitted into their desired major in another college or school may also be offered admission into the School of Undergraduate Studies.

Detailed information about the admission process is provided in *General Information* (<http://catalog.utexas.edu/general-information>), which also includes information about registration, adding and dropping courses, transferring from one division of the University to another, and the academic calendar. The *Course Schedule* (<http://registrar.utexas.edu/schedules>), published before registration each semester, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are available through the registrar's Web site, <http://registrar.utexas.edu/>.

## Academic Policies and Procedures

### Basic Education Requirements

The University strives to enroll exceptionally well-prepared, highly motivated students and to produce self-reliant graduates who will become leaders in both their chosen professions and their communities. The University must not only equip its graduates with occupational skills but also educate them broadly enough to enable them to adapt to and cope with the accelerated process of change occurring in business, professional, and social institutions today. Students must be exposed to a broad spectrum of arts and science so that they may be educated beyond vocational requirements and

thus be prepared for responsible citizenship in an increasingly complex world.

All graduates of the University are expected to

- communicate clearly and accurately, defend an idea on the basis of evidence, draw conclusions, and evaluate the arguments of others;
- have a critical understanding of the society in which we live and the ways it has evolved through time;
- be able to analyze ethical issues and their possible resolutions;
- understand facets of science and the ways in which knowledge of the universe is gained and applied;
- understand aspects of mathematics and apply quantitative skills to problem solving;
- have a critical understanding of how human cultures are expressed in literature, philosophy, or language;
- participate in and/or critically analyze some area of the visual and performing arts; and
- participate in the process of inquiry through research, creative endeavors, or related activities.

To help students in all majors acquire the traits of an educated person, the General Faculty of the University has adopted the core curriculum outlined below. All students, regardless of major, must complete the core curriculum prior to earning an undergraduate degree.

Often, courses required by the student's degree program may be used concurrently to fulfill one or more of the core curriculum requirements listed below. When possible, students should select core courses that also satisfy specific requirements of their intended degrees. For more information, students should consult their advisers and the degree requirements given in the college/school sections of this catalog.

## Core Curriculum

All students pursuing an undergraduate degree at the University must complete the following required coursework. These requirements are consistent with statewide core curriculum guidelines; the area of the statewide core that each requirement meets is given in parentheses in the following table. A single course may not be counted toward more than one core area.

The minimum acceptable grade for courses used to fulfill core curriculum requirements is *D-*; individual degree plans may not require a higher minimum standard for core courses in general. However individual degree plans may set a higher minimum grade standard for core courses that are also required in the major field or are required as prerequisites for courses in the major.

State law requires that courses fulfilling a core component area (including the institutionally designated option) at one Texas public institution must transfer and substitute for the receiving institution's requirements. However, this only applies to courses taken when a student does not hold degree-seeking status at UT Austin. While a student holds degree-seeking status at UT Austin, courses taken to fulfill core curriculum requirements must meet UT Austin core definitions in the relevant UT Austin undergraduate catalog, regardless of where they are taken.

Core Area	Sem Hrs
<p><b>First-year signature course</b> (090, Institutionally designated option)  <i>One of the following courses, completed during the student's first year in residence:</i>            &gt; Undergraduate Studies 302, 303            Students in the Plan II Honors Program may complete this requirement by taking Tutorial Course 302.</p>	3
<p><b>English composition</b> (010, Communication)  <i>Six hours are required.</i>            &gt; Rhetoric and Writing 306            Nonnative speakers of English may complete three hours of this requirement by taking Rhetoric and Writing 306Q.            Students in the Plan II Honors Program may complete three hours of this requirement by taking English 603A or Tutorial Course 603A.            &gt; A three-hour course with a writing flag designation            The writing flagged course counted toward this area of the core may also be used to satisfy other flag and major requirements outside the core, but may not be used to satisfy any other requirement of the core.</p>	6
<p><b>Humanities</b> (040, Humanities)            &gt; English 316K            Students in the Plan II Honors Program may complete this requirement by taking English 603B or Tutorial Course 603B.</p>	3
<p><b>American and Texas government</b> (070, Political Science)            Six hours are required. This coursework partially fulfills the legislative requirement (p. 18). ROTC courses may not be substituted for the core courses in government.            Government 310L is required for all students            Government 312L, 312P, or 312R may be used to satisfy the second half of this requirement            Transfer students with five or more hours of coursework in American government may complete this requirement of the core by taking Government 105, which includes Texas government content that is consistent with the legislative requirement (p. 18).</p>	6
<p><b>American history</b> (060, U.S. History)            Six hours are required; three hours may be in Texas history.            This coursework partially fulfills the legislative requirement (p. 18). ROTC courses may not be substituted for the core courses in history.            government.  <i>The following courses may be counted:</i>            History 314K, 315G, 315K, 315L, 317L, 320L, 320P, 320R, 333L, 333M, 334L, 336L, 340S, 345J, 345L, 345M, 350R, 351N, 351P, 355F, 355M, 355N, 355P, 355S, 356G, 356K, 356N, 356P, 356R, 357C, 357D, 357F, 357P, 365G, 373C, 376F</p>	6

**Social and behavioral sciences** (080, Social/Behavioral Science) 3

*One of the following courses:*

- > Anthropology 302, 305, 307, 318L
  - > Core Texts and Ideas 302, 365
  - > Economics 301, 304K, 304L
  - > Geography 305, 306C, 307C, 308, 309, 312, 319
  - > History 329U
  - > Human Development and Family Sciences 304
  - > Linguistics 306, 312
  - > Psychology 301
  - > Religious Studies 310
  - > Sociology 302, 308, 308C, 308D, 309, 313K, 318, 319
- Students in the Plan II Honors Program may complete this requirement by taking Social Science 301.

**Mathematics** (020, Mathematics) 3

*One of the following courses:*

- > Mathematics 302, 303D, 403K, 305G, 408C, 408K, 408N, 408R, 316
- > Statistics and Scientific Computation 302, 303, 304, 305, 306, 318

Students in the Plan II Honors Program may complete this requirement by taking Mathematics 310P.

**Science and technology, Part I** (030, Natural science) 6

Six hours in a single field of study.

*The following courses may be counted:*

- > Astronomy 301, 302, 303, 307, 309, 309L, 309N, 309Q, 309R, 309S, 309T

*Only one of the following may be counted: Astronomy 301, 302, 303, 307. Astronomy 309Q may not be paired with 309N or 309R.*

- > Biology 301D, 301L, 301M, 311C, 311D, 315H, 325H, 326M, 446L, 365S

*It is recommended that students complete two courses chosen from Biology 301D, 301L, and 301M; or one of the following pairs of courses: Biology 311C and 311D, Biology 311C and 326M, Biology 311C and 446L, Biology 311C and 365S, Biology 315H and 325H.*

- > Chemistry 301, 302, 301H, 302H, 304K, 305, 314N

*It is recommended that students complete one of the following pairs of courses: Chemistry 301 and 302, 301H and 302H, 304K and 305.*

- > Geological Sciences 401, 302C, 302D, 302E, 302K, 302M, 302P, 303, 404C, 405, 305E, 307, 420H

*Only one of the following may be counted: Geological Sciences 401, 303, 420H. Geological Sciences 404C may not be paired with 405.*

- > Marine Science 307, 308

- > Natural Sciences 306J, 306K, 306L, and 306M

*Students may use NSC 306J and NSC 306K and either NSC 306L or NSC 306M to fulfill the requirements for science and technology, part I, and science and technology, part II.*

- > Physical Science 303, 304; Physics 301, 302K, 302L, 303K, 303L, 309K, 309L, 316, 317K, 317L

*Physical Science 303 may not be counted with Physics 301, 302K, 303K, 309K, and 317K to complete Science and Technology Part I. Physical Science 304 may not be counted with Physics 302L, 303L, 309L, 316, and 317L to complete Science and Technology Part I. It is recommended that students complete one of the following pairs of courses: Physics 301 and 316; 302K and 302L; 303K and 303L; 309K and 309L; 317K and 317L; Physical Science 303 and 304.*

Students in the Plan II Honors Program may use Biology 301E or Physics 321 to fulfill half of this requirement. To complete the six-hour requirement in this area, Plan II students may pair Biology 301E with Biology 301D or 311C, or Physics 321 with any physics course listed above. If Plan II students do not use Biology 301E or Physics 321 to fulfill this requirement, they may use them to fulfill the science and technology, part II, requirement.

Students who take the Natural Sciences 306J and 306K sequence to complete science and Technology Part I may not use chemistry, geology, physical science, or physics coursework to satisfy Science and Technology Part II.

Students who take Natural Sciences 306J to complete Science and Technology Part II may not use physical science or physics coursework to satisfy Science and Technology Part I.



**Science and technology, Part II** (031, Additional natural sciences) 3

Three hours in a field of study different from the field counted toward the preceding requirement.

*Courses listed under science and technology, part I, may be counted toward this requirement; the following courses may also be counted:*

- > Anthropology 301, 304
- > Biology 301C, 305E, 305F, 406D, 307D, 309D, 309F
- > Computer Science 302, 307, 312
- > Electrical Engineering 302, 306
- > Geography 301C, 301K, 304E
- > Natural Sciences 306J, 306K, 306L, and 306M

Students who take the Natural Sciences 306J and 306K sequence to complete science and Technology Part I may not use chemistry, geology, physical science, or physics coursework to satisfy Science and Technology Part II. Students who take Natural Sciences 306J to complete Science and Technology Part II may not use physical science or physics coursework to satisfy Science and Technology Part I.

**Visual and performing arts** (050, Visual/Performing Arts) 3

*One of the following courses:*

- > American Studies 330
- > Architecture 308, 318K, 318L
- > Art History 301, 302, 303

*The following courses may also be counted: Art History 325, 327N, 327R, 329J, 329R, 330G, 331K, 331L, 332K, 332L, 333K, 333L, 335P, 337K, 338L, 339J, 339K, 339L, 339M, 341K, 341L, 347K, 347L, 347M, 359, 361, 361L, 362, 362R, 363, 364, 365, 366J, 366N, 366P, 367, 370, 372.*

- > Classical Civilization 301, 302, 303, 307C, 307D, 317
- > Core Texts and Ideas 350, 351
- > Fine Arts 310
- > Music 302L, 302P, 303M, 303N, 303P, 606A, 307, 313, 334
- > Philosophy 317K, 346
- > Radio-Television-Film 305, 314, 316
- > Studio Art 320K, 320L
- > Theatre and Dance 301, 302T, 303, 317C, 317D
- > Visual Art Studies 320

**Total 42**

## Signature Courses

The purpose of the signature course is to provide all students with a common intellectual experience that engages them in college-level thinking and learning early in their college careers.

Signature courses introduce undergraduates to academic discussion and analysis of issues from an interdisciplinary perspective. Signature courses are taught in small seminar format and large format. All signature courses are designed to:

- engage students with an issue of contemporary importance, introduce them to the methods of more than one discipline, and emphasize college-level skills in communication, reasoning, and the interpretation of data;
- familiarize students with at least one of the University's special resources, such as libraries, museums, and research facilities;
- incorporate at least one University Lecture, which will help create a common experience for all first-year students; and
- help students acquire a measure of information literacy in disciplines relevant to the class.

The signature course is required for all students, regardless of major. New transfer students are encouraged to enroll in signature courses that are recommended for more experienced students. More information about signature courses is available at <http://www.utexas.edu/ugs/sig/>.

## Additional Basic Education Requirements

### Skills and Experience Flags

In the process of fulfilling the core curriculum and other degree requirements, all undergraduates are expected to complete courses with content in the following six areas:

- Writing: three flagged courses beyond Rhetoric and Writing 306 or its equivalent
- Quantitative reasoning: one flagged course
- Global cultures: one flagged course
- Cultural diversity in the United States: one flagged course
- Ethics and leadership: one flagged course
- Independent inquiry: one flagged course

Courses with sufficient content in these areas will be identified in the *Course Schedule* by the appropriate flags. The School of Undergraduate Studies monitors flagged courses to ensure that they meet the guidelines set by the General Faculty. When a course is approved to carry more than one flag, enrolled students may use all of those flags to fulfill degree requirements, except that the global cultures flag and the cultural diversity in the United States flag must be earned in separate courses.

Most degree programs are in the process of implementing flag requirements. Students who choose to graduate according to the requirements of the *2012–2014 Undergraduate Catalog* should consult their advisers and the degree requirements listed in chapters 3 through 16 of this catalog to determine which of the flag requirements apply to them.

## Foreign Language

In addition to the core curriculum requirements above, undergraduates are expected to have completed two years in a single foreign language in high school. Students without two years of high school foreign language coursework must earn credit for the second college-level course in a foreign language; this credit does not count toward the student's degree. Students should consult their advisers and the degree requirements listed in chapters 3 through 16 of this catalog to determine whether additional foreign language requirements apply to them.

## Programs and Centers

### Center for Strategic Advising & Career Counseling

The Center for Strategic Advising & Career Counseling in the School of Undergraduate Studies provides academic advising and career counseling services to students in three categories:

- New students who select the School of Undergraduate Studies so that they may delay their choice of college or school until after a period of exploration
- New students who are admitted to the School of Undergraduate Studies after having been denied admission to their first two choices of major
- New and continuing students in transition from one major to another enrolled in any undergraduate college or school at the University

The Center for Strategic Advising & Career Counseling helps students to examine career aspirations and academic interests with the goal of developing a viable and rewarding path through the University. The center has a comprehensive library with thousands of resources for major and career exploration as well as internship preparation and provides a variety of services in the areas of strategic academic advising, major exploration, career counseling and assessment, and graduate and professional school planning and preparation.

After a one- to four-semester period of exploration and strategic advising, students enrolled in the School of Undergraduate Studies choose a major in one of the University's other colleges or schools. More information about the Center for Strategic Advising & Career Counseling is available at <http://www.utexas.edu/ugs/csa/>.

## Sanger Learning Center

The Sanger Learning Center is the primary provider of academic assistance to University students. To help students reach their highest potential in their personal and academic development, the center provides a variety of services and resources in the areas of mathematics, science, learning strategies, and graduate and professional school planning and preparation. The center also offers content-based discussion sections, study groups, and tutoring for difficult courses. Services are free to currently enrolled students in all schools and colleges (some restrictions may apply).

## Programs

- **Tutorial Services**—a program certified by the College Reading and Learning Association (CRLA) up to the master tutor level—provides both individual and group tutoring. More specifically, one-to-one tutoring by appointment and small group tutoring sessions are offered for many lower-division undergraduate classes. Drop-in tutoring is also available for selected natural sciences and mathematics courses, as well as writing consultation for graduate students.
- **Supplemental Instruction** is a nationally recognized program aimed at improving student performance, increasing retention, and enhancing teaching. The program targets historically difficult entry-level courses by offering students regularly scheduled discussion sections led by trained undergraduate and/or graduate students.
- The center's classes and workshops also meet a broad spectrum of student needs, ranging from mathematics and science reviews to graduate examination preparation to general study strategies to career assessment.
- **Peer-Led Undergraduate Studying (PLUS)**, a program that aims to support student performance and motivation in historically difficult courses by offering class-specific weekly study groups. Group leaders offer a collaborative group study experience tailored to the needs of their classmates.

- **Peer Academic Coaching**, a program certified by the CRLA at the master tutor level, offers structured guidance over time to students needing assistance with skills such as reading efficiency, note-taking, time and project management, test taking, and test preparation.

More information about the Sanger Learning Center is available at <http://lifelearning.utexas.edu/>.

## First-Year Interest Groups

First-year Interest Groups (FIGs) are cohorts of up to twenty-five students who take two to four courses together during the first semester of their first year. These small groups help students get to know each other and make the transition from high school to college. Each FIG includes a weekly one-hour seminar led by a trained peer mentor and staff member. During the seminar, participants are introduced to University resources and have opportunities to explore their intellectual interests and to interact with each other, the mentor, advising staff, and faculty members.

College-based FIGs are designed for students in the same major or department. Signature FIGs provide an opportunity for first-year students to take core courses in a group of eighteen students and receive academic assistance from a Signature Course Peer Mentor. The Residential First-year Interest Group program (ResFIG) offers incoming freshmen the opportunity to join a cohort of students with whom they live, study, participate in community service projects, and take classes.

More information about FIGs is available at <http://www.utexas.edu/ugs/fig/>.

## Bridging Disciplines Programs

The Bridging Disciplines Programs (BDPs) support students in becoming versatile thinkers with the skills to collaborate across disciplines and cultures. The BDPs are designed to complement a student's major with an individualized plan of study leading to an interdisciplinary certificate in one of the following areas:

- Children and Society
- Conflict Resolution and Peace Studies
- Cultural Studies
- Digital Arts and Media
- Environment
- Ethics and Leadership
- Film Studies
- Global Studies
- Human Rights and Social Justice
- Innovation, Creativity, and Entrepreneurship
- Social Entrepreneurship and Nonprofits
- Social Inequality, Health, and Policy

Each BDP is overseen by an interdisciplinary faculty panel that sets policy, approves courses, and selects students. Within each broad area, students choose a specific strand of specialized courses drawn from disciplines across the University. Students are encouraged to use the BDP theme to select courses and integrate degree requirements; to this end, courses taken to fulfill core curriculum requirements, courses fulfilling major requirements, and electives may also be

counted toward a BDP. Participation in undergraduate research and internships is also central to the design of the BDPs.

All degree-seeking undergraduates at the University are eligible to apply for the BDPs. With careful planning, a BDP can complement most degree plans. However, because the BDPs build on core requirements and electives, students are encouraged to start early in their University careers.

Undergraduates who complete BDP requirements in conjunction with their degree requirements or within one year after earning the degree receive a certificate and recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine semester hours of the certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University.

A student may not earn a certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

In order to earn a BDP certificate, students must satisfy the following requirements:

1. At least nineteen semester hours of coursework. The distribution of coursework varies by specialization, and students should consult the BDP office for the requirements of each program. For all specializations, the coursework requirements consist of the following:
  - A. *Foundation Courses*: One to ten hours in foundation courses that introduce key concepts and methodologies related to the interdisciplinary concentration.
  - B. *Connecting Experiences*: Three to nine hours in undergraduate research, internships, and/or independent creative project courses that connect students' interdisciplinary concentration to their major.
  - C. *Courses in a Strand*: Six to twelve hours in courses in a strand, which allows students to focus their remaining BDP coursework. Course listings for BDP strands are located on the BDP Web site at <http://www.utexas.edu/ugs/bdp/>.
2. A three- to four-page integration essay in which students reflect on what they have learned and accomplished through their BDP experience. These essays will be reviewed by members of a BDP faculty panel. Additional guidelines are available from the BDP advisers.
3. Students must earn a grade of at least C- in each of the courses taken to fulfill BDP requirements and the cumulative grade point average in all courses counting toward a student's BDP certificate must be at least 2.0. All but one of the courses taken to fulfill BDP requirements must be taken on the letter-grade basis.

4. At least half of the required course work in the BDP certificate must be completed in residence at The University of Texas at Austin.
5. Completion of the requirements of a major.

More information about BDPs is available at <http://www.utexas.edu/ugs/bdp/>.

## Office of Undergraduate Research

Every undergraduate at the University has the opportunity to become a researcher and to take part in the vibrant intellectual work of the University. Undergraduates often bring enthusiasm and fresh ideas to the research process and are valuable contributors to this work. The Office of Undergraduate Research connects students to research opportunities and resources, raises awareness of undergraduate research in all disciplines, and provides support to faculty members and advisers who work with undergraduates.

Services offered through the Office of Undergraduate Research include weekly information sessions on research involvement, individual advising sessions, and workshops on a variety of topics tailored to the needs of student groups and advisers. The office also offers a workshop series that guides students through the process of submitting an abstract and presenting their work at a national conference.

To facilitate involvement in undergraduate research, the School of Undergraduate Studies offers two courses that students may take to receive credit for research experiences with University faculty members: Undergraduate Studies 310 and 320. Enrollment in these courses is coordinated through the Office of Undergraduate Research.

The Office of Undergraduate Research also oversees EUREKA (<http://www.utexas.edu/research/eureka/>), a Web site devoted to undergraduate research resources and opportunities at the University. The site provides a searchable database of more than two thousand faculty research profiles, a list of faculty projects with opportunities for undergraduates, a research guide with information on getting started, and spotlights on successful faculty/student collaborations.

More information on the Office of Undergraduate Research is available online at <http://www.utexas.edu/ugs/ugr/> or by phone at (512) 471-5949.

## University Honors Center

The Honors Center in the School of Undergraduate Studies is a focal point for interdisciplinary honors activities at the University. The center offers a variety of enrichment programs for undergraduate honors students and support to the campus activities of several national honor societies including: Alpha Lambda Delta, Phi Eta Sigma, National Society of Collegiate Scholars, Phi Beta Kappa, Phi Kappa Phi, and Mortar Board.

More information about the Honors Center is available in the General Information Catalog and at <http://www.utexas.edu/ugs/uhc/>.

## Longhorn Scholars Program

The Longhorn Scholars Program is designed for students from selected Texas high schools whose graduates have historically been underrepresented at the University.

Throughout their four years at the University, Longhorn Scholars benefit from strategic academic advising, peer mentoring, and access

to classes taught by outstanding faculty members. Students also have opportunities to develop leadership skills, participate in faculty research, and participate in the diverse educational experiences offered at the University.

Participation in the Longhorn Scholars Program is by invitation. More information about the Longhorn Scholars Program is available at <http://www.utexas.edu/ugs/lsp/>.

## Texas Success Initiative

The Texas Success Initiative is a state-legislated program designed to improve student success in college. The two components of the program are:

- Assessment of each student's basic skills in reading, mathematics, and writing, and
- Developmental instruction to strengthen academic skills that need improvement.

More information about the Texas Success Initiative is available in the General Information Catalog and at <http://www.utexas.edu/ugs/tsi>.

## Courses

### Bridging Disciplines: BDP

#### Lower-Division Courses

##### **BDP 101, 201, 301. Forum Seminar Series.**

Restricted to freshmen and sophomores, and to students in the Bridging Disciplines Programs. Discussion of various contemporary issues, with an emphasis on interdisciplinary perspectives and critical discourse. For 101, two lecture hours a week for eight weeks; for 201, two lecture hours a week for one semester; for 301, three lecture hours a week for one semester. Some topics are offered on the letter-grade basis only. Bridging Disciplines 101, 201, 301 and Connexus 118, 218, 318 may not both be counted. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **BDP 306. Fundamentals of Ethical Leadership.**

Restricted to freshmen and sophomores, and to students in the Bridging Disciplines Programs. Discussion of various contemporary issues related to ethical leadership, with an emphasis on interdisciplinary perspectives and critical discourse. Three lecture hours a week for one semester. Offered on the letter-grade basis only.

##### **BDP 306C. Principles of Business.**

Restricted to nonbusiness students. Interdisciplinary examination of how businesses function in the Western world. Discusses the development of the corporation in the United States, ethical issues, and the primary areas of business. Three lecture hours a week for one semester. Bridging Disciplines 301 (Topic: Principles of Business) and 306C may not both be counted. Offered on the letter-grade basis only.

##### **BDP 110, 210, 310. Connecting Research Experience.**

Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the Bridging Disciplines

research coordinator, may be repeated for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.

##### **BDP 310S. Connecting Research Experience: Service Learning.**

Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Research may consist of an individual project involving service to the community or assisting a faculty research project with a community service component. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.

##### **BDP 111, 211, 311. Connecting Internship Experience.**

Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program. Internships may be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 111, three hours of fieldwork a week for one semester; for 211, six hours of fieldwork a week for one semester; for 311, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.

##### **BDP 311S. Connecting Internship Experience: Service Learning.**

Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Internships must be unpaid and may include work with nonprofit organizations or other organized community service entities. Ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Consent of the Bridging Disciplines research coordinator.

##### **BDP 119, 219, 319. Specialized Forum Seminar Series.**

Restricted to freshmen and sophomores. Discussion of various contemporary issues, with an emphasis on multidisciplinary perspectives and critical discourse. For 119, two lecture hours a week for eight weeks; for 219, two lecture hours a week for one semester; for 319, three lecture hours a week for one semester. Some topics require additional hours or laboratory hours; these are identified in the Course Schedule. Some topics are offered on the letter-grade basis only. Bridging Disciplines 119, 219, 319 and Connexus 118, 218, 318 may not both be counted. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### Upper-Division Courses

##### **BDP 120, 220, 320. Connecting Research Experience.**

Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.



### **BDP 320S. Connecting Research Experience: Service Learning.**

Restricted to students in the Bridging Disciplines Programs. Supervised research with a faculty member, related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Research may consist of an individual project involving service to the community or assisting a faculty research project with a community service component. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.

### **BDP 121, 221, 321. Connecting Internship Experience.**

Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 121, three hours of fieldwork a week for one semester; for 221, six hours of fieldwork a week for one semester; for 321, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.

### **BDP 321S. Connecting Internship Experience: Service Learning.**

Restricted to students in the Bridging Disciplines Programs. Supervised internship experience related to the interdisciplinary themes of a Bridging Disciplines Program and including an academic service-learning component. Internships must be unpaid and may include work with nonprofit organizations or other organized community service entities. Ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines research coordinator, may be repeated once for credit. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator.

### **BDP 322. Team-Based Research Experience.**

Collaborative or team-based research or creative project, under the supervision of a faculty member. Topics are related to the interdisciplinary themes of the Bridging Disciplines Programs. Individual instruction. With consent of the Bridging Disciplines research coordinator, may be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of the Bridging Disciplines research coordinator. Additional prerequisites may vary with the topic.

### **BDP 126, 226, 326. Advanced Forum Seminar Series.**

Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on interdisciplinary perspectives and critical discourse. For 126, two lecture hours a week for eight weeks; for 226, two lecture hours a week for one semester; for 326, three lecture hours a week for one semester. Some topics may require additional hours or lab hours; these are identified in the Course Schedule. Some topics are offered on the letter-grade basis only; these are identified in the Course Schedule. Bridging Disciplines 126, 226, 326 and Connexus 128C, 228C, 328C may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

### **BDP 129, 229, 329. Specialized Advanced Forum Seminar Series.**

Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on interdisciplinary perspectives, research, and critical discourse. For 129, two lecture hours a week for eight weeks; for 229, two lecture hours a week for one semester; for 329, three lecture hours a week for one semester. Some topics may require additional hours or laboratory hours; these are identified in the Course Schedule. Some topics are offered on the letter-grade basis only; these are identified in the Course Schedule. Bridging Disciplines 129, 229, 329 and Connexus 128C, 228C, 328C may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

## **Developmental Studies: DEV**

### **Lower-Division Courses**

#### **DEV 000M. Basic Mathematics and Algebra Skills.**

Developmental mathematics instruction. Emphasis on fundamental mathematics, including computation skills, graphing, and solving word problems, and on algebraic graphing, equations, operations, and quadratics. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

#### **DEV 000R, 300R. Basic Reading Skills.**

Developmental reading instruction, with emphasis on strategies for improving vocabulary, reading comprehension, and reading study skills. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

#### **DEV 000W, 300W. Basic Writing Skills.**

Developmental writing instruction, with emphasis on the elements of composition, sentence structure, and standard English usage and mechanics. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

#### **DEV 301M. Developmental Mathematics I.**

The first of a two-course sequence. Combines arithmetic skills, including operations with whole numbers, fractions, and decimals, and ratios, proportions, and percents; with beginning algebra, including variables, straight-line graphs, setting up and solving word problems, and relating simple algebraic concepts to geometry. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

#### **DEV 302M. Developmental Mathematics II.**

Continuation of Developmental Studies 301M. Includes linear equations, systems of equations, integers, exponents and scientific notation, factoring polynomials, rational expressions and equations, radical expressions, and geometric problems. Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory

basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

### **DEV 303M. Basic Mathematics and Algebra Skills Review.**

Three lecture hours a week for one semester. Offered on the satisfactory/unsatisfactory basis only. With consent of the Texas Success Initiative office, may be repeated for credit. May not be counted toward any degree.

## **Undergraduate Studies: UGS**

### **Lower-Division Courses**

#### **UGS 302. First-Year Signature Course.**

Restricted to first-year students. Seminar class focusing on a contemporary issue. Designed to introduce undergraduates to scholarly analysis from an interdisciplinary perspective. Includes an introduction to University resources, such as research facilities, museums, and attendance at University lectures or performances as assigned. Multiple sections may be offered in the fall and spring with various topics and instructors. Three lecture hours a week for one semester. Some sections may require additional meeting times; these are identified in the Course Schedule. Only one of the following may be counted: Tutorial Course 301, 302, Undergraduate Studies 302, 303.

#### **UGS 303. First-Year Signature Course.**

Restricted to first-year students. Large-group lecture and discussion class focusing on a contemporary issue. Designed to introduce undergraduates to scholarly analysis from an interdisciplinary perspective. Includes an introduction to University resources, such as research facilities, museums, and attendance at University lectures or performances as assigned. Multiple sections may be offered in the fall and spring with various topics and instructors. Three lecture hours a week for one semester. Some sections may require additional meeting times; these are identified in the Course Schedule. Only one of the following may be counted: Tutorial Course 301, 302, Undergraduate Studies 302, 303.

#### **UGS 104. First-Year Interest Group Mentor Seminar.**

Restricted to students selected as mentors for the First-Year Interest Group program. Issues and research in various areas of leadership, communication, student development, and the transition from high school to college. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Consent of the program coordinator of the First-Year Interest Group program office.

#### **UGS 309. Analytical Reading and Writing.**

Examination of fundamental concepts in analytical reading from different disciplinary perspectives, with an emphasis on sociocultural influences on comprehension and writing styles. Three lecture hours a week for one semester. Connexus 318 (Topic: Analytical Reading and Writing) and Undergraduate Studies 309 may not both be counted. Prerequisite: Consent of the Texas Success Initiative coordinator.

#### **UGS 110, 210, 310. Undergraduate Research Experience.**

Restricted to freshmen and sophomores. Supervised research with a faculty member. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the undergraduate studies research coordinator, may be repeated for credit. Prerequisite: Consent of the undergraduate studies research coordinator.

#### **UGS 111, 211, 311. Undergraduate Internship Experience.**

Supervised internship experience. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 111, three hours of fieldwork a week for one semester; for 211, six hours of fieldwork a week for one semester; for 311, ten hours of fieldwork a week for one semester. With consent of the undergraduate studies research coordinator, may be repeated once for credit. Prerequisite: Consent of the undergraduate studies research coordinator.

#### **UGS 018. First-Year Interest Group Seminar.**

Restricted to students in the First-Year Interest Group Program. Basic issues in various interdisciplinary fields of study. One lecture hour a week for one semester.

#### **UGS 119. International Learning Seminar.**

Restricted to students registered in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of studying abroad in particular locations. Two lecture hours a week for eight weeks, or as required by the topic. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

### **Upper-Division Courses**

#### **UGS 120, 220, 320. Undergraduate Research Experience.**

Supervised research with a faculty member. Research may consist of an individual project or assisting a faculty research project. Individual instruction. With consent of the undergraduate studies research coordinator, may be repeated for credit. Prerequisite: Upper-division standing and consent of the undergraduate studies research coordinator.

#### **UGS 121, 221, 321. Undergraduate Internship Experience.**

Supervised internship experience. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 121, three hours of fieldwork a week for one semester; for 221, six hours of fieldwork a week for one semester; for 321, ten hours of fieldwork a week for one semester. With consent of the undergraduate studies research coordinator, may be repeated once for credit. Prerequisite: Upper-division standing and consent of the undergraduate studies research coordinator.

#### **UGS 122. DemTex.**

Student-facilitated research and discussion-based course, under the supervision of a faculty adviser. One lecture hour a week for one semester. With the consent of the research coordinator in the School of Undergraduate Studies, may be repeated for credit when the topics vary. May not be counted toward any degree. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and consent of the research coordinator in the School of Undergraduate Studies.

# School of Architecture

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Frederick R. Steiner, PhD, *Dean*

Kevin S. Alter, MArch, *Associate Dean, Graduate Programs*

Michael Oden, PhD, *Associate Dean, Research and Operations*

Nichole Wiedemann, MArch, *Associate*

*Dean, Undergraduate Programs*

<http://soa.utexas.edu/>

## General Information

### Accreditation

The School of Architecture is a member of the Association of Collegiate Schools of Architecture and the Association of Collegiate Schools of Planning. The Bachelor of Architecture and Master of Architecture are accredited by the National Architectural Accrediting Board and satisfy the registration requirements of the Texas Board of Architectural Examiners. The Bachelor of Science in Interior Design satisfies the interior design registration requirements of the Texas Board of Architectural Examiners; it is accredited by the Council for Interior Design Accreditation and the National Association of Schools of Art and Design. The Master of Science in Community and Regional Planning is accredited by the American Planning Association.

### Mission

The School of Architecture seeks to assist those who wish to develop knowledge, sensitivity, and skill in design, planning, and construction, so that as architects, interior designers, and planners they may improve the human environment. The curriculum offers opportunities for a broad education in professional subjects and in the arts and the humanities. Through avenues that stress solving actual and theoretical problems, the school seeks to enhance the knowledge and skill necessary to link understanding to experience, theory to practice, and art to science in ways that respond to human needs, aspirations, and sensibilities. Through its consortium of architects, interior designers, planners, and educators and scholars in these fields, the school provides a service to society and to the architecture, interior design, and planning professions by advancing the state of the art in design and technology.

### History

The University began offering professional degrees in architecture in 1910 within the Department of Engineering. The School of Architecture was established in 1948 as a division of the College of Engineering and became an autonomous school of the University in September 1951. Graduate study in architecture began at the University in 1912. More than five thousand undergraduate and graduate degrees in architecture and planning have been conferred.

Education in community and regional planning was first offered as an undergraduate study option in the School of Architecture from 1948 to 1957. The Master of Science in Community and Regional Planning was formally approved in October 1959; the Doctor of Philosophy, in April 1995.

Education in interior design was first offered in 1939 within the degree of Bachelor of Science in Home Economics. In 1992 the College of Natural Sciences created the Bachelor of Science in Interior Design degree program; in the fall of 1998 this program was transferred to the

School of Architecture. The first interior design degrees were conferred by the school in May 2001.

### Facilities

The School of Architecture is centrally located on campus in four adjacent buildings: the historically significant Battle Hall (1911); Sutton Hall (1918, renovated in 1982), designed by distinguished American architect Cass Gilbert; Goldsmith Hall (1933, expanded and renovated in 1988), designed by noted architect Paul Philippe Cret, one of the primary planners of the forty-acre campus; and the West Mall Office Building (1961).

The Architecture and Planning Library, a branch of the University Libraries, provides reference and instructional services through expert staff to researchers who have access to nearly 100,000 volumes, 300 periodicals, and a wealth of online resources.

The Alexander Architectural Archive is a research center of national importance. Over a quarter of a million drawings, 1,800 linear feet of papers, photographs, and other formats are preserved and made available for scholarship.

The Visual Resources Collection (VRC) is a collection of over 100,000 digital images and about 240,000 slides of significant works of architecture, art, interior design, furniture design, and landscape architecture. A fully equipped black-and-white darkroom is available to School of Architecture students for a nominal fee.

The University Co-op Materials Resource Center offers an inspirational environment of material systems and technologies. The more than 25,000 material samples include traditional as well as smart, innovative, emerging, and sustainable design materials.

Digital Fabrication includes both digital input and output tools such as 3-D scanners, 3-D printers, CNC routers, and laser cutters, enabling students to utilize modern technology in architecture and design.

IO Central and Computer Lab is the technological environment for individual, group, and classroom work. The laboratory has computer work stations formatted with the most up-to-date software as well as large-format color scanners, laser-jet printers, and high-resolution plotters.

The Thermal Lab is the testing facility of the Center for Sustainable Development that simulates a full-scale room with a south-facing façade, allowing for the thermal experiments which include innovative applications in the fields of light-control, ventilation, and the direct and indirect use of solar energy.

The Wood Shop plays an integral role in the creation of design, ranging from models to full-scale applications, by providing equipment and training, primarily in wood, but also in metal, plastic, and glass.

The Center for American Architecture and Design regularly stages symposia; publishes *CENTER*, *Centerline*, and the *O'Neil Ford Monograph* and *Duograph* book series; and supports independent research and scholarship in architecture and design. In addition, the center hosts the bi-weekly *Friday Lunch Forum Series*.

The Center for Sustainable Development supports the study and practice of sustainable development in Texas, the nation, and the world through complementary programs of research, education, and community outreach. Associated faculty and students strive to better understand the connections between the environment, economic prosperity and social justice.

The Lady Bird Johnson Wildflower Center exists to introduce people to the beauty and diversity of wildflowers and other native plants. The mission of the center is to increase the sustainable use and conservation of native wildflowers, plants, and landscapes.

The Harry Ransom Center, one of the world's foremost institutions for literary and cultural research, houses a large collection of rare architecture books, including the classics of architectural literature.

The Teresa Lozano Long Institute of Latin American Studies and the Benson Latin American Collection provide exceptional opportunities for the study of Latin American architecture.

## Financial Assistance Available through the School

Scholarship funds established by individuals, foundations, and the University are available to current undergraduates in the School of Architecture. These include the ARCHITEXAS Endowed Scholarship; the Marvin E. and Anne Price Beck Endowed Scholarship; the Carl O. Bergquist Endowed Scholarship; the Myron Geer Blalock Endowed Presidential Scholarship; the Hal Box Endowed Scholarship in Architecture; the C. William Brubaker/Perkins+Will Endowed Presidential Scholarship; the John Buck Company and First Chicago Investment Advisors for Fund F Endowed Scholarship in Architecture; the John S. Chase Endowed Presidential Scholarship; the Fred W. and Laura Weir Clarke Endowed Presidential Scholarships in Architecture Honoring Carl Bergquist and Alan Y. Taniguchi; the Fred Winfield Day, Jr. Endowed Scholarship in Architecture; the Jorge Luis Divino Centennial Scholarship in Architecture; the Amy Dryden Endowed Scholarship; the William H. Emis III Traveling Scholarship in Architecture; the Ford, Powell & Carson Endowed Scholarship; the Ted Freedman Endowed Scholarship; the Suzie Friedkin Endowed Scholarship in Interior Design; the Lily Rush Walker and Coulter Hoppess Scholarship in Architecture; the HDR Architecture Endowed Scholarship; the Wolf E. Jessen Endowed Fund; the Henrietta Chamberlain King Endowed Scholarship; the Lake/Flato Endowed Scholarship; the Lynne Brundrett Maddox Scholarship in Interior Design; the Mike and Maxine Mebane Endowed Traveling Scholarship in Architecture; the Jack H. Morgan Scholarship; the Charles M. Nettles Endowed Presidential Scholarship; the Oglesby Prize Endowment; the Overland Partners Endowed Scholarship; the Barbara and Donald Pender Endowed Scholarship; the Edward J. Perrault Endowed Presidential Scholarship in Interior Design; the Alma Piner Scholarship in Architecture; the Brandon Shaw Memorial Endowed Scholarship; the Debbie Ann Rock Scholarship in Interior Design; the School of Architecture Scholarship and Fellowship Award Endowment; the Louis F. Southerland Endowed Scholarship; the Lance Tatum Endowed Scholarship; the University of Texas at Austin School of Architecture's Advisory Council Women's Endowed Scholarship; the Wilmont "Vic" Vickrey Endowed Scholarship; the Robert Leon White Memorial Fund—Architecture; the Roxanne Williamson Endowed Scholarship; and several scholarships provided by the American Institute of Architects, the American Architectural Foundation, the Texas Society of Architects, the Texas American Planning Association, and the Texas Architectural Foundation. Additional information is available in the Office of the Dean.

Incoming students may wish to contact local chapters of the American Institute of Architects, the American Society of Interior Designers, the International Interior Design Association, and the University's Texas Exes, as well as other civic organizations, for information about locally sponsored scholarships. Students are also encouraged to contact the

University's Office of Student Financial Services for information about other merit- and need-based scholarships.

## Student Services

### Academic Advising

In the School of Architecture, the undergraduate dean's office, located in Goldsmith Hall 2.116, and the academic adviser's office, located in Goldsmith Hall 2.118, are responsible for providing information and advice to undergraduate students. An important aspect of the advising system is the third-year portfolio requirement described in the section Third-year Portfolio Review Requirement (p. 33) later in Admission and Registration. The student should also consult Degree Audit in the Graduation (p. 33) section.

### Career Services

The Career Services Center, located in Sutton Hall 2.126, serves the students and alumni of the School of Architecture by offering career development and job search resources, connecting them to employers, mentors, and key professionals.

## Student Organizations

The Undergraduate Architecture Student Council (UASC) represents all School of Architecture undergraduate students through the promotion and development of an awareness of the built environment and serves as a nucleus for student activities. The UASC acts as a liaison between students and faculty members as well as administrators.

American Institute of Architecture Students (AIAS) is a professional organization whose mission is to promote excellence, appreciation, and advancement of architecture, and to enrich communities in a spirit of collaboration. AIAS strives to provide a sense of community and a forum for sharing different views.

Alpha Rho Chi (APX) is a professional/social co-ed fraternity for architecture and the allied arts that promotes the artistic, scientific, and practical proficiency of its members and the profession. The Dinocrates Chapter at The University of Texas at Austin unites students from various years and studies through philanthropic and professional activities.

Ampersand is a student organization that combines the student chapters of the International Interior Design Association (IIDA) and the American Society of Interior Designers (ASID), provides students with networking opportunities, and promotes involvement within the interior design community.

The National Organization of Minority Architecture Students (NOMAS) is the University of Texas at Austin Student Chapter of the National Organization of Minority Architects. The organization strives to enhance education and professional networking as well as engage solutions to ensure a healthy living and working environment for the community at large.

## Study Abroad and Internship Opportunities

The School of Architecture encourages first-hand experiences of diverse peoples, places and cultures, nationally and internationally, so that we might better engage the world in which we live. Educational



travel experiences can be integrated into degree plans in several ways, including, but not limited to, the following:

Study in Italy is a semester at the Santa Chiara Study Center in Tuscany, approximately an hour's drive from Florence. The program allows for an intensive study of design, history, and visual communication, while the center's historic structure provides a congenial campus environment and a base for travel throughout Italy.

The Europe Program is a semester of study that emphasizes a broad and integrated experience covering the buildings and landscapes as well as the urban fabric across Europe. With a unique itinerary every fall, the program gives students special study opportunities with regard to design, history, and visual communication in each city visited.

Studio Mexico is an advanced studio for architecture and landscape architecture students that explores the rich cultural and built environment of Mexico. During a nine-day trip to Mexico, students visit a project site and other significant places, and enjoy rich interaction with Mexican students working on the same project. Students participating in the studio are required to take the Mexican architecture class taught by Professor Juan Miro, either concurrently with the studio or in the previous year.

The professional residency program provides upper-level architecture students with a unique opportunity to expand their education through work experience in the architectural profession. The program has provided work experience to honors students in the school since 1974, and over the past twenty years our students have been linked with 260 firms in twenty-nine countries.

## Admission and Registration

### Admission

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

Students who are not admitted to the School of Architecture may not pursue any degree offered by the school. Information about admission is published by the school at <http://soa.utexas.edu/>.

The School of Architecture is one of the smallest academic units at The University of Texas at Austin. Our undergraduate student body exemplifies the diverse constitution of the communities we strive to serve. In support of unique perspectives and experiences, all applications are reviewed with an understanding that excellence may manifest itself in many areas and may be expressed in different forms, such as compelling essays, strong academic preparation, extracurricular activities, excellent test scores, life experiences, as well as other accomplishments.

### Freshman Admission

The School of Architecture is unable to accommodate all qualified applicants, and preference is given to candidates considered to have best demonstrated the interest, aptitude, and dedication to pursuing a design education. All applicants are evaluated with emphasis on the following areas: SAT or ACT scores, class rank, essays, academic preparation, extracurricular activities, and other achievements. Texas-resident high school students have priority over nonresidents in admission decisions. All applicants must fulfill the high school unit requirements given in *General Information*.

To be considered for admission to the School of Architecture, applicants should select the appropriate degree program on the ApplyTexas application: architecture, interior design, the architecture/architectural engineering dual degree program, the architecture/Plan II dual degree program, architectural studies, or architectural studies with an emphasis on architectural history. All application materials must be submitted to the Office of Admissions by the deadline to apply for admission to the University for the fall semester; this date is given in *General Information*. Applicants to the dual degree program offered with the Plan II Honors Program must submit an additional application; more information about Plan II (p. 309) is provided within the Liberal Arts section of the *Undergraduate Catalog*.

## Transfer

### Internal Transfer

Students currently or formerly enrolled in other University degree programs who wish to enroll in a degree program in the School of Architecture must submit an Internal Transfer Application to the undergraduate dean's office in the School of Architecture by March 1 to be considered for admission for the following fall semester. To request a major change, students applying for internal transfer must have completed a minimum of twenty-four semester hours of credit in residence (excluding credit-by-exam) by the end of a spring semester, with a University grade point average of at least 3.25. Emphasis is given to strong performance in University courses, especially courses relevant to the degree program to which the applicant is applying. Meeting these requirements is no guarantee for admission.

### External Transfer

Transfer applicants from architecture and interior design programs in other universities will be evaluated with emphasis given to excellence in design (portfolio required), academic preparation, essays, and other achievements. Course credit and placement in studio sequence is determined upon acceptance. External transfer admission is offered to a few qualified applicants each year.

Students applying to transfer from another university to the School of Architecture should select the appropriate degree program on the ApplyTexas application. All application materials must be submitted to the Office of Admissions by the deadline to apply for admission to the University for the fall semester; this date is given in *General Information*. To be considered for transfer admission to the School of Architecture, the applicant must have completed at least thirty semester hours of transferable college coursework and must submit a portfolio which includes architecture or interior design studio work from another university; information about the portfolio is given on the school's transfer admission Web site, <http://soa.utexas.edu/admissions/transerfaq/>. All admission decisions are made before the end of the spring semester; the Office of Admissions cannot consider spring coursework in progress.

### Transfer Credit

External transfer students with credit from another school must submit samples of their design work and, if applicable, visual communication work, transcripts, course descriptions and/or syllabi for courses in their majors. On the basis of the information submitted, the undergraduate dean's office determines the level at which students enter the design sequence and assigns credit toward the degree if appropriate.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University

to another, and auditing a course. The online *Course Schedule*, published at <http://registrar.utexas.edu/schedules> before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

Students should carefully verify that they have completed all course prerequisites, should consult the undergraduate dean's office, and should be sure to include in each semester's work the courses that are prerequisites for those to be taken in later semesters.

## Minimum Number of Hours in the Long Session

Students must register each semester for at least twelve semester hours of coursework prescribed for the degree. Registration for fewer hours must be approved by the undergraduate dean's office.

## Third-Year Portfolio Review Requirement

On the first day of class in the second semester of the third-year, students entering Architecture 530T, *Design VI*, are required to submit a portfolio that summarizes the work completed in all the previous design and visual communication courses. Guidelines for the submission of the portfolio, including deadline, are available from the undergraduate dean's office.

A successful completion of the *Design VI* studio and a satisfactory Third-Year Portfolio Review are required for entry into Architecture 560R, *Advanced Design*. The portfolio provides critical information to the reviewing committee in evaluating the student's progress toward the degree. The reviewing committee, at its discretion, may require the student to complete additional work, including courses prior to or after registering for advanced studios.

# Academic Policies and Procedures

## Equipment and Supplies

Students are responsible for their own tools and supplies, which include, but are not limited to, laptop computer and software, hand drawing and modeling equipment, and materials. More information on the Student Computer Policy is available at <http://soa.utexas.edu/>.

## Academic Standards

To progress in all degree programs offered by the School of Architecture and to qualify for graduation, a student must earn a grade of at least C in all architecture, interior design, and community and regional planning courses. In a case where a student earns a grade below C, the course may only be repeated once.

In the process of fulfilling the requirements for degrees in the School of Architecture, including the core curriculum, students must earn credit for one flag in cultural diversity in the United States, one flag in ethics and leadership, one flag in global cultures, one flag in independent inquiry, one flag in quantitative reasoning, and three flags in writing. Courses used to fulfill flag requirements may be used simultaneously to fulfill other degree requirements. Courses with flags are identified in the *Course Schedule*, published at <http://registrar.utexas.edu/schedules>.

## Honors

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

### School of Architecture Recognition Awards

*Award:* Alpha Rho Chi Medal

*Donor:* Alpha Rho Chi, professional architectural fraternity

*Eligibility:* Graduating student who has shown an ability for leadership, has performed willing service to the school, and gives promise of professional merit through attitude and personality.

*Award:* American Institute of Architects' Medal

*Donor:* American Institute of Architects

*Eligibility:* Graduating student, in recognition of scholastic achievement, character, and promise of professional ability.

*Award:* Boone Powell Family Prize in Urban Design

*Donor:* Boone Powell, Leilah Powell, and the Catherine H. Powell Family Trust

*Eligibility:* Non-graduating undergraduate or graduate student pursuing a degree in architecture or planning from The University of Texas at Austin; based on merit in urban design.

*Award:* The Oglesby Traveling Fellowship

*Donor:* Oglesby Family

*Eligibility:* Students graduating from The University of Texas at Austin with either a Bachelor of Architecture or Master of Architecture; based on merit in architectural design.

## Graduation

All students must fulfill the general requirements (p. 18) for graduation given in The University section. Students in the School of Architecture must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. In the School of Architecture, thirty of these sixty hours must be in the major or in a field closely related to the major as approved by the dean.
2. A candidate for a degree must be registered at the University either in residence or in absentia the semester or summer session the degree is to be awarded, and must file an application for the degree in the undergraduate dean's office. Students are encouraged to file the application at the beginning of the semester or summer session in which they intend to graduate; they must file it by the deadline given in the official academic calendar.

## Degree Audit

The undergraduate dean's office prepares a degree audit for each currently enrolled student each semester. The degree audit lists the courses the student has taken, the degree requirements he or she has fulfilled, and the requirements that remain to be met. The student may also use the University's interactive degree audit system, IDA, at any time. IDA is available at <http://registrar.utexas.edu/students/degrees/ida/>. It is the student's responsibility to know the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and to register so as to fulfill those requirements.

## Degrees and Programs

### Degrees Offered

Five undergraduate degree programs are offered by the School of Architecture: Bachelor of Architecture; Bachelor of Architecture/Bachelor of Science in Architectural Engineering; Bachelor of Architecture/Bachelor of Arts, Plan II; Bachelor of Science in Architectural Studies; and Bachelor of Science in Interior Design. Specific requirements and suggested arrangement of courses for each degree program are given in this chapter under the heading for the degree.

### Applicability of Certain Courses

#### Extension Courses

A student in residence may be allowed to take coursework by extension. Credit that the student in residence earned by extension will not be counted toward the degree unless it is approved in advance by the undergraduate dean's office. No more than 30 percent of the semester hours required for any degree may be taken by extension.

#### Courses Taken on the Pass/Fail Basis

An undergraduate may count toward the degree up to fifteen hours of coursework in electives completed on the pass/fail basis; credit earned by examination is not counted toward the fifteen hours. If a student chooses to major in a subject in which he or she has taken a course pass/fail, the major department decides whether the course may be counted toward the student's major requirements. Complete rules on registration on the pass/fail basis are given in *General Information*.

#### Physical Activity Courses

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward the number of hours required for a degree in the School of Architecture. However, they are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

#### ROTC Courses

No more than six semester hours of air force science, military science, or naval science coursework may be counted toward any degree in the School of Architecture. These courses may be used only as lower-division electives (in degree programs that have such electives) and only by students who complete the third and fourth years of the ROTC program.

## Admission Deficiencies

Students admitted to the University with deficiencies in high school units must remove them as specified in *General Information*. Course credit used to remove deficiencies may not be counted toward the student's degree.

## Bachelor of Science in Interior Design

As a four-year professional degree, the Bachelor of Science in Interior Design is a rigorous design-oriented curriculum with a strong theoretical basis to integrate creative problem-solving skills with an understanding of the aesthetic, technological, and behavioral aspects of design.

### Curriculum

A total of at least 126 hours of coursework is required for the Bachelor of Science in Interior Design.

All students must complete the University's Core Curriculum (p. 22) as well as the courses listed in the following table. In some cases, a course that is required for the BSID degree may also be counted toward the core curriculum; these courses are identified below.

Courses	Sem Hrs
Architectural Interior Design, Architecture	78
• <i>Design</i> : Architectural Interior Design 310K, 310L, 320K, 520L, 530K, 530T, 560R (taken twice)	
• <i>Visual communication</i> : Architectural Interior Design 311K, 311L, 221K	
• <i>Design theory</i> : Architectural Interior Design 350R	
• <i>Interior building systems and construction</i> : Architectural Interior Design 434K, Architecture 415K	
• <i>Professional practice</i> : Architectural Interior Design 362	
• <i>History</i> : Architectural Interior Design 318K, 318M, 368R, Architecture 368R	
• <i>Environmental controls</i> : Architectural Interior Design 324K, Architecture 334L	
• <i>Human behavior</i> : Architectural Interior Design 338	
• <i>Professional internship</i> : Architectural Interior Design 130	
Mathematics 408C (meets the mathematics requirement of the core curriculum)	4
Physics 302K, 302L, 102M, 102N (sequence meets part I of the science and technology requirement of the core curriculum)	8
Psychology 301 (meets the social and behavioral sciences requirement of the core curriculum)	3
Architecture 318K (meets the visual and performing arts requirement of the core curriculum), 318L	6
Upper-division course in art history	3
Additional coursework to satisfy the core curriculum	24
<b>Total</b>	<b>126</b>

# Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
Fall	
Architectural Interior Design 310K, <i>Design I</i>	3
Architectural Interior Design 311K, <i>Visual Communication I</i>	3
Architectural Interior Design 318K, <i>Interiors and Society</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Physics 302K, <i>General Physics--Technical Course: Mechanics, Heat, and Sound</i>	3
Physics 102M, <i>Laboratory for Physics 302K</i>	1
<b>Total 17</b>	
Spring	
Architectural Interior Design 310L, <i>Design II</i>	3
Architectural Interior Design 311L, <i>Visual Communication II</i>	3
Architecture 318K, <i>World Architecture: Origins to 1750</i>	3
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
Undergraduate Studies 302, <i>First-Year Signature Course</i> or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total 15</b>	
<b>Second Year</b>	
Fall	
Architectural Interior Design 320K, <i>Design III--Interiors</i>	3
Architectural Interior Design 221K, <i>Visual Communication III</i>	2
Architecture 415K, <i>Construction I</i>	4
Architecture 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3
Physics 302L, <i>General Physics--Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3
Physics 102N, <i>Laboratory for Physics 302L</i>	1
<b>Total 16</b>	
Spring	
Architectural Interior Design 520L, <i>Design IV--Interiors</i>	5
Architectural Interior Design 434K, <i>Construction II--Interior Materials and Assemblies</i>	4
Architectural Interior Design 318M, <i>Interior Design History</i>	3
Architecture 368R, <i>Topics in the History of Architecture</i>	3
<b>Total 15</b>	
<b>Third Year</b>	
Fall	
Architectural Interior Design 530K, <i>Design V--Interiors</i>	5
Architectural Interior Design 324K, <i>Environmental Controls I</i>	3
Architectural Interior Design 368R, <i>Interior Design History II</i>	3
History 315K, <i>The United States, 1492-1865</i>	3
Psychology 301, <i>Introduction to Psychology</i>	3

	<b>Total 17</b>
Spring	
Architectural Interior Design 530T, <i>Design VI--Interiors</i>	5
Architecture 334L, <i>Environmental Controls II</i>	3
Architectural Interior Design 362, <i>Interior Design Practice</i>	3
English 316K, <i>Masterworks of Literature</i>	3
Upper-division art history elective	3
<b>Total 17</b>	
Summer	
Architectural Interior Design 130, <i>Interior Design Internship</i>	1
<b>Total 1</b>	
<b>Fourth Year</b>	
Fall	
Architectural Interior Design 560R, <i>Advanced Interior Design</i>	5
Architectural Interior Design 338, <i>Designing for Human Behavior</i>	3
Architectural Interior Design 350R, <i>Topics in Interior Design Theory</i>	3
Government 310L, <i>American Government</i>	3
<b>Total 14</b>	
Spring	
Architectural Interior Design 560R, <i>Advanced Interior Design</i>	5
Government 312L, <i>Issues and Policies in American Government</i>	3
History 315L, <i>The United States since 1865</i>	3
Science and technology, part II, core course	3
<b>Total 14</b>	

## Bachelor of Architecture Curriculum

As a five-year professional degree program, the Bachelor of Architecture features a rigorous design-oriented curriculum with a solid foundation in technology and the history and theory of architecture. The curriculum prepares students for the challenges and demands of professional practice.

A total of at least 161 hours of coursework is required for the Bachelor of Architecture. All students must complete the University's Core Curriculum (p. 22) as well as the courses listed in the following table. In some cases, a course that is required for the BArch may also be counted toward the core curriculum; these courses are identified below.

Courses	Sem Hrs
<b>Major Sequence Courses</b>	



• <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (taken three times), 560T	104
• <i>Visual communication</i> : Architecture 311K, 311L, 221K, 361T	
• <i>Professional practice</i> : Architecture 362	
• <i>Site design</i> : Architecture 333	
• <i>Environmental controls</i> : Architecture 334K, 334L	
• <i>Construction</i> : Architecture 415K, 415L, 435K, 435L, 335M	
• <i>History</i> : Architecture 308 (meets the visual and performing arts requirement of the core curriculum), 318K, 318L, 368R (taken three times)	
Community and Regional Planning 369K	3
<b>Other Required Courses</b>	
Mathematics 408C (meets the mathematics requirement of the core curriculum)	4
Physics 302K, 302L, 102M, 102N (physics sequence meets part I of the science and technology requirement of the core curriculum).	8
Electives approved by the undergraduate dean's office	15
<b>Core Curriculum</b>	
Additional coursework to satisfy the core curriculum	27
<b>Total</b>	<b>161</b>

Architecture 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3
Physics 302L, <i>General Physics--Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3
Physics 102N, <i>Laboratory for Physics 302L</i>	1
<b>Total</b>	<b>16</b>

Spring	
Architecture 520L, <i>Design IV</i>	5
Architecture 415L, <i>Construction II</i>	4
Architecture 333, <i>Site Design</i>	3
History 315K, <i>The United States, 1492-1865</i>	3
<b>Total</b>	<b>15</b>

<b>Third Year</b>	
Fall	
Architecture 520M, <i>Design V</i>	5
Architecture 435K, <i>Construction III</i>	4
Architecture 334K, <i>Environmental Controls I</i>	3
Architecture 368R, <i>Topics in the History of Architecture</i>	3
<b>Total</b>	<b>15</b>

Spring	
Architecture 530T, <i>Design VI</i>	5
Architecture 435L, <i>Construction IV</i>	4
Architecture 334L, <i>Environmental Controls II</i>	3
Social and behavioral sciences core course	3
<b>Total</b>	<b>15</b>

<b>Fourth Year</b>	
Fall	
Architecture 560R, <i>Advanced Design</i>	5
Architecture 368R, <i>Topics in the History of Architecture</i>	3
Government 310L, <i>American Government</i>	3
Science and technology, part II, core course	3
Elective	3
<b>Total</b>	<b>17</b>

Spring	
Architecture 560T, <i>Advanced Design</i>	5
Architecture 361T, <i>Technical Communication</i>	3
Community and Regional Planning 369K, <i>Principles of Physical Planning</i>	3
Government 312L, <i>Issues and Policies in American Government</i>	3
Elective	3
<b>Total</b>	<b>17</b>

<b>Fifth Year</b>	
Fall	
Architecture 560R, <i>Advanced Design</i>	5
Architecture 335M, <i>Construction V</i>	3
English 316K, <i>Masterworks of Literature</i>	3
History 315L, <i>The United States since 1865</i>	3
Elective	3
<b>Total</b>	<b>17</b>

Spring	
Architecture 560R, <i>Advanced Design</i>	5
Architecture 362, <i>Professional Practice</i>	3

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
Fall	
Architecture 310K, <i>Design I</i>	3
Architecture 311K, <i>Visual Communication I</i>	3
Architecture 308, <i>Architecture and Society</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Undergraduate Studies 302, <i>First-Year Signature Course</i> or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total</b>	<b>16</b>
Spring	
Architecture 310L, <i>Design II</i>	3
Architecture 311L, <i>Visual Communication II</i>	3
Architecture 318K, <i>World Architecture: Origins to 1750</i>	3
Physics 302K, <i>General Physics--Technical Course: Mechanics, Heat, and Sound</i>	3
Physics 102M, <i>Laboratory for Physics 302K</i>	1
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
<b>Total</b>	<b>16</b>
<b>Second Year</b>	
Fall	
Architecture 320K, <i>Design III</i>	3
Architecture 221K, <i>Visual Communication III</i>	2
Architecture 415K, <i>Construction I</i>	4

Architecture 368R, <i>Topics in the History of Architecture</i>	3
Electives	6
<b>Total</b>	<b>17</b>

- *Design*: Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (taken twice), 560T
- *Visual communication*: Architecture 311K, 311L, 221K, 361T
- *Professional practice*: Architecture 362
- *Site design*: Architecture 333
- *Construction*: Architecture 335M
- *History*: Architecture 308 (meets the visual and performing arts requirement of the core curriculum), 318K, 318L, 368R (taken three times)

## Bachelor of Architecture/ Bachelor of Science in Architectural Engineering Dual Degree Program

As a six-year dual professional degree program, the Bachelor of Architecture/Bachelor of Science in Architectural Engineering is founded upon the mutual interests of both architecture and architectural engineering.

For admission to the dual degree program, a student must meet the Admission Requirements (p. 32) of the School of Architecture and the requirements given in Admission and Registration (p. 149) for the Cockrell School of Engineering. Students are advised to contact both the School of Architecture and the Cockrell School of Engineering for specific information about the dual degree program.

Students in the dual degree program complete the requirements of the Bachelor of Architecture and the Bachelor of Science in Architectural Engineering degrees. See the descriptions for the the five-year Bachelor of Architecture (p. 35) degree program and the Bachelor of Science in Architectural Engineering (p. 160) for more information.

The following outline of courses is the suggested method for completing the requirements for both degrees simultaneously. Dual degree students must also consult the additional requirements of the Bachelor of Science in Architectural Engineering (p. 160) degree. Dual degree students are responsible for fulfilling the requirements of both degrees.

A student who follows the suggested arrangement of courses below completes all requirements for both degrees at the end of the spring semester of the sixth year.

### Curriculum

A total of at least 197 hours of coursework is required for this dual degree program.

All students must complete the University's Core Curriculum (p. 22) as well as the courses listed in the following table. In some cases, a course that is required for the dual degree program may also be counted toward the core curriculum; these courses are identified below.

Courses	Sem Hrs
Architecture	77

Community and Regional Planning 369K	3
Architectural Engineering 102, 217, 323K, 335, 346N, 346P or 370, 465, 366	22
Chemistry 301 (meets part II of the science and technology requirement of the core curriculum)	3
Civil Engineering 311K, 311S, 314K, 319F, 329, 331 or 335, 333T, 357	24
Engineering Mechanics 306, 319	6
Geological Sciences 303	3
Mathematics 408C (meets the mathematics requirement of the core curriculum), 408D, 427K	12
Mechanical Engineering 320	3
Physics 303K, 303L, 103M, 103N (sequence also meets part I of the science and technology requirement of the core curriculum)	8
Approved mathematics or science elective	3
Approved technical electives	9
Additional coursework to satisfy the core curriculum	24
<b>Total</b>	<b>197</b>

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
Fall	
Architecture 310K, <i>Design I</i>	3
Architecture 311K, <i>Visual Communication I</i>	3
Architecture 308, <i>Architecture and Society</i>	3
Architectural Engineering 102, <i>Introduction to Architectural Engineering</i>	1
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Undergraduate Studies 302, <i>First-Year Signature Course</i> or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total</b>	<b>17</b>
Spring	
Architecture 310L, <i>Design II</i>	3
Architecture 311L, <i>Visual Communication II</i>	3
Architecture 318K, <i>World Architecture: Origins to 1750</i>	3
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
Physics 303K, <i>Engineering Physics I</i>	3
Physics 103M, <i>Laboratory for Physics 303K</i>	1

	<b>Total 17</b>	
<b>Second Year</b>		
Fall		
Architecture 320K, <i>Design III</i>	3	
Architecture 221K, <i>Visual Communication III</i>	2	
Architecture 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3	
Engineering Mechanics 306, <i>Statics</i>	3	
Physics 303L, <i>Engineering Physics II</i>	3	
Physics 103N, <i>Laboratory for Physics 303L</i>	1	
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3	
	<b>Total 18</b>	
Spring		
Architecture 520L, <i>Design IV</i>	5	
Architecture 333, <i>Site Design</i>	3	
Civil Engineering 311K, <i>Introduction to Computer Methods</i>	3	
Chemistry 301, <i>Principles of Chemistry I</i>	3	
Engineering Mechanics 319, <i>Mechanics of Solids</i>	3	
	<b>Total 17</b>	
<b>Third Year</b>		
Fall		
Architecture 520M, <i>Design V</i>	5	
Civil Engineering 311S, <i>Probability and Statistics for Civil Engineers</i>	3	
Civil Engineering 329, <i>Structural Analysis</i>	3	
Civil Engineering 314K, <i>Properties and Behavior of Engineering Materials</i>	3	
Mechanical Engineering 320, <i>Applied Thermodynamics</i>	3	
	<b>Total 17</b>	
Spring		
Architecture 530T, <i>Design VI</i>	5	
Architectural Engineering 217, <i>Computer-Aided Design and Graphics</i>	2	
Architectural Engineering 335, <i>Materials and Methods of Building Construction</i>	3	
Architectural Engineering 346N, <i>Building Environmental Systems</i>	3	
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4	
	<b>Total 17</b>	
<b>Fourth Year</b>		
Fall		
Architecture 368R, <i>Topics in the History of Architecture</i>	3	
Civil Engineering 319F, <i>Elementary Mechanics of Fluids</i>	3	
English 316K, <i>Masterworks of Literature</i>	3	
Approved mathematics or science elective	3	
Social and behavioral sciences core	3	
	<b>Total 15</b>	
Spring		
Architectural Engineering 323K, <i>Project Management and Economics</i>	3	
Civil Engineering 331, <i>Reinforced Concrete Design</i> , or Civil Engineering 335, <i>Elements of Steel Design</i>	3	

Civil Engineering 357, <i>Geotechnical Engineering</i>	3
Community and Regional Planning 369K, <i>Principles of Physical Planning</i>	3
Government 310L, <i>American Government</i>	3
	<b>Total 15</b>
<b>Fifth Year</b>	
Fall	
Architecture 560R, <i>Advanced Design</i>	5
Architectural Engineering 346P, <i>HVAC Design</i> , or Architectural Engineering 370, <i>Design of Energy Efficient and Healthy Buildings</i>	3
Civil Engineering 333T, <i>Engineering Communication</i>	3
History 315K, <i>The United States, 1492-1865</i>	3
Approved technical elective	3
	<b>Total 17</b>
Spring	
Architecture 335M, <i>Construction V</i>	3
Architectural Engineering 366, <i>Contracts, Liability, and Ethics</i>	3
Architectural Engineering 465, <i>Integrated Design Project</i>	4
Approved technical electives	6
	<b>Total 16</b>
<b>Sixth Year</b>	
Fall	
Architecture 560T, <i>Advanced Design</i>	5
Architecture 361T, <i>Technical Communication</i>	3
Architecture 368R, <i>Topics in the History of Architecture</i>	3
Geological Sciences 303, <i>Introduction to Geology</i>	3
History 315L, <i>The United States since 1865</i>	3
	<b>Total 17</b>
Spring	
Architecture 560R, <i>Advanced Design</i>	5
Architecture 362, <i>Professional Practice</i>	3
Architecture 368R, <i>Topics in the History of Architecture</i>	3
Government 312L, <i>Issues and Policies in American Government</i>	3
	<b>Total 14</b>

## Bachelor of Architecture/ Bachelor of Arts, Plan II Dual Degree Program

The Bachelor of Architecture/Bachelor of Arts, Plan II, dual degree program is sponsored jointly by the School of Architecture and the College of Liberal Arts. The five-year program, which includes summer sessions, offers the academic and professional advantage of a strong liberal arts background.

Students interested in this program should consult the Plan II Program (p. 309) description given in the College of Liberal Arts.

The following outline of courses is a suggested method for simultaneously completing the requirements for both degree programs. Students should consult their advisers, the lists below, and the Bachelor of Arts, Plan II (p. 309) degree program given in the

College of Liberal Arts to ensure that their coursework plans will fulfill all requirements of both degrees.

## Curriculum

A total of at least 186 hours of coursework is required for this dual degree program.

All students must complete the University's Core Curriculum (p. 22) as well as the courses listed in the following table. In some cases, a course that is required for the dual degree program may also be counted toward the core curriculum; these courses are identified below.

Courses	Sem Hrs
Architecture	104
• <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M, 530T, 560R (taken three times), 560T	
• <i>Visual communication</i> : Architecture 311K, 311L, 221K, 361T	
• <i>Professional practice</i> : Architecture 362	
• <i>Site design</i> : Architecture 333	
• <i>Environmental controls</i> : Architecture 334K, 334L	
• <i>Construction</i> : Architecture 415K, 415L, 435K, 435L, 335M	
• <i>History</i> : Architecture 308 (meets the visual and performing arts requirement of the core curriculum), 318K, 318L, 368R (taken three times)	
Community and Regional Planning 369K	3
English 603 or Tutorial Course 603 (this two-semester course meets the English composition and humanities requirements of the core curriculum)	6
Foreign language 506, 507, 312K, and 312L, or an equivalent sequence	16
Mathematics 408C (meets the mathematics requirement of the core curriculum)	4
Philosophy 610Q	6
Physics 302K, 302L, 102M, 102N (or 303K, 303L, 103M, 103N) (physics sequence meets part I of the science and technology requirement of the core curriculum)	8
Social Science 301 (meets the social and behavioral sciences requirement of the core curriculum)	3
Tutorial Course 302 (meets the first-year signature course requirement of the core curriculum), 357 (taken twice), 359T	12
Biology 301E (counts toward part II of the science and technology requirement of the core curriculum)	3
Natural science elective	3
Electives	6
Additional coursework to satisfy the core curriculum	12
<b>Total</b>	<b>186</b>

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	

Fall	
Architecture 310K, <i>Design I</i>	3
Architecture 311K, <i>Visual Communication I</i>	3
Architecture 308, <i>Architecture and Society</i>	3
English 603A or Tutorial Course 603A: <i>Composition and Reading in World Literature</i>	3
Tutorial Course 302, <i>First-Year Signature Course: Plan II</i>	3
<b>Total</b>	<b>15</b>

Spring	
Architecture 310L, <i>Design II</i>	3
Architecture 311L, <i>Visual Communication II</i>	3
Architecture 318K, <i>World Architecture: Origins to 1750</i>	3
English 603B or Tutorial Course 603B: <i>Composition and Reading in World Literature</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
<b>Total</b>	<b>16</b>

Summer	
Physics 302K, <i>General Physics--Technical Course: Mechanics, Heat, and Sound</i>	3
Physics 102M, <i>Laboratory for Physics 302K</i>	1
Physics 302L, <i>General Physics--Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3
Physics 102N, <i>Laboratory for Physics 302L</i>	1
<b>Total</b>	<b>8</b>

### Second Year

Fall	
Architecture 320K, <i>Design III</i>	3
Architecture 221K, <i>Visual Communication III</i>	2
Architecture 415K, <i>Construction I</i>	4
Architecture 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3
History 315K, <i>The United States, 1492-1865</i>	3
<b>Total</b>	<b>15</b>

Spring	
Architecture 520L, <i>Design IV</i>	5
Architecture 415L, <i>Construction II</i>	4
Architecture 333, <i>Site Design</i>	3
Architecture 368R, <i>Topics in the History of Architecture</i>	3
<b>Total</b>	<b>15</b>

Summer	
Foreign language 506 (or 406)	5
Foreign language 507 (or 407)	5
<b>Total</b>	<b>10</b>

### Third Year

Fall	
Architecture 520M, <i>Design V</i>	5
Architecture 435K, <i>Construction III</i>	4
Architecture 334K, <i>Environmental Controls I</i>	3
Social Science 301, <i>Honors Social Science</i>	3
<b>Total</b>	<b>15</b>

Spring	
Architecture 530T, <i>Design VI</i>	5
Architecture 435L, <i>Construction IV</i>	4



Architecture 334L, *Environmental Controls II* 3  
 Biology 301E, *Problems in Modern Biology* 3

**Total 15**

Summer

Foreign language 312K 3  
 Foreign language 312L 3  
 Government 310L, *American Government* 3  
 Government 312L, *Issues and Policies in American Government* 3

**Total 12**

**Fourth Year**

Fall

Architecture 560R, *Advanced Design* 5  
 Philosophy 610QA, *Problems of Knowledge and Valuation* 3  
 History 315L, *The United States since 1865* 3  
 Tutorial Course 357, *The Junior Seminar* 3

**Total 14**

Spring

Architecture 560T, *Advanced Design* 5  
 Architecture 361T, *Technical Communication* 3  
 Philosophy 610QB, *Problems of Knowledge and Valuation* 3  
 Tutorial Course 357, *The Junior Seminar* 3  
 Elective 3

**Total 17**

**Fifth Year**

Fall

Architecture 560R, *Advanced Design* 5  
 Architecture 335M, *Construction V* 3  
 Architecture 368R, *Topics in the History of Architecture* 3  
 Tutorial Course 359T, *Essay Course* 3  
 Science course prescribed by the Plan II committee 3

**Total 17**

Spring

Architecture 560R, *Advanced Design* 5  
 Architecture 362, *Professional Practice* 3  
 Architecture 368R, *Topics in the History of Architecture* 3  
 Community and Regional Planning 369K, *Principles of Physical Planning* 3  
 Elective 3

**Total 17**

## Bachelor of Science in Architectural Studies

The four-year, pre-professional Bachelor of Science in Architectural Studies degree program, with an optional architectural history track, is an excellent platform for future graduate studies in architecture and associated fields. The required coursework is concentrated in the first three years, leaving the fourth year to develop the student's career interests.

Applicants for admission to this program must fulfill the Requirements for Admission (p. 32) to the School of Architecture given in this chapter.

The Bachelor of Science in Architectural Studies alone does not fulfill the educational requirements for registration as an architect. Students interested in pursuing registration must complete a first-professional degree in architecture.

## Curriculum

A total of at least 125 hours of coursework is required for the Bachelor of Science in Architectural Studies.

All students must complete the University's Core Curriculum (p. 22) as well as the courses listed in the following table. In some cases, a course that is required for the BSArchStds may also be counted toward the core curriculum; these courses are identified below.

Courses	Sem Hrs
Architecture	60
• <i>Design</i> : Architecture 310K, 310L, 320K, 520L, 520M	
• <i>Visual communication</i> : Architecture 311K, 311L, 221K	
• <i>Design theory</i> : Architecture 350R	
• <i>Site design</i> : Architecture 333	
• <i>Environmental controls</i> : Architecture 334K	
• <i>Construction</i> : Architecture 415K, 415L, 435K	
• <i>History</i> : Architecture 308 (meets the visual and performing arts requirement of the core curriculum), 318K, 318L, 368R	
Mathematics 408C (meets the mathematics requirement of the core curriculum)	4
Physics 302K, 302L, 102M, 102N (or 303K, 303L, 103M, 103N) (physics sequence meets part I of the science and technology requirement of the core curriculum)	8
Upper-division humanities elective in literature, foreign language, philosophy, or another field approved by the undergraduate dean's office	3
Philosophy elective	3
Electives (foreign language courses that are used to remove an admission deficiency may not be used to fulfill this requirement and may not be counted toward the degree)	20
Additional coursework to satisfy the core curriculum	27
<b>Total</b>	<b>125</b>

## Electives

Twenty-six semester hours of electives are required for the completion of the Bachelor of Science in Architectural Studies degree program. These electives consist of three hours of upper-division coursework in humanities, three hours in philosophy, and twenty additional open elective hours, generally completed outside the School of Architecture. Students pursuing the architectural history track must take eighteen of their twenty hours of open electives in architectural history. Up to six hours of related coursework taken at the University, and approved by the program director, may be used to fulfill the elective requirement.

# Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
Fall	
Architecture 310K, <i>Design I</i>	3
Architecture 311K, <i>Visual Communication I</i>	3
Architecture 308, <i>Architecture and Society</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Undergraduate Studies 302, <i>First-Year Signature Course</i> or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total 16</b>	
Spring	
Architecture 310L, <i>Design II</i>	3
Architecture 311L, <i>Visual Communication II</i>	3
Architecture 318K, <i>World Architecture: Origins to 1750</i>	3
Physics 302K, <i>General Physics--Technical Course: Mechanics, Heat, and Sound</i>	3
Physics 102M, <i>Laboratory for Physics 302K</i>	1
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
<b>Total 16</b>	
<b>Second Year</b>	
Fall	
Architecture 320K, <i>Design III</i>	3
Architecture 221K, <i>Visual Communication III</i>	2
Architecture 415K, <i>Construction I</i>	4
Architecture 318L, <i>World Architecture: The Industrial Revolution to the Present</i>	3
Physics 302L, <i>General Physics--Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics</i>	3
Physics 102N, <i>Laboratory for Physics 302L</i>	1
<b>Total 16</b>	
Spring	
Architecture 520L, <i>Design IV</i>	5
Architecture 415L, <i>Construction II</i>	4
Architecture 333, <i>Site Design</i>	3
History 315K, <i>The United States, 1492-1865</i>	3
<b>Total 15</b>	
<b>Third Year</b>	
Fall	
Architecture 520M, <i>Design V</i>	5
Architecture 435K, <i>Construction III</i>	4
Architecture 334K, <i>Environmental Controls I</i>	3
Architecture 368R, <i>Topics in the History of Architecture</i>	3
<b>Total 15</b>	
Spring	
Architecture 350R, <i>Topics in Design Theory</i>	3
Electives	12
<b>Total 15</b>	
<b>Fourth Year</b>	
Fall	

Government 310L, <i>American Government</i>	3
History 315L, <i>The United States since 1865</i>	3
Philosophy elective	3
Science and technology, part II, core course	3
Social and behavioral sciences core course	3
<b>Total 15</b>	
Spring	
English 316K, <i>Masterworks of Literature</i>	3
Government 312L, <i>Issues and Policies in American Government</i>	3
Approved upper-division humanities elective	3
Electives	8
<b>Total 17</b>	

## Courses

The faculty has approval to offer the following courses in the academic years 2012-2013 and 2013-2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* at <http://registrar.utexas.edu/schedules/> to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog. For current information, students should consult the schedule posted in the School of Architecture.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Architectural Interior Design: ARI

### Lower-Division Courses

#### ARI 310K. Design I.

Restricted to students in the School of Architecture. Introduction to studio design, with an emphasis on foundations in form, space, scale, human aspects of design, movement, structure, and place-making. Nine hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architectural Interior Design 311K.

#### ARI 310L. Design II.

Restricted to students in the School of Architecture. Application of foundation elements, such as light, color, and texture. Introduction of concerns for program and activity accommodation within interior environments. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.

### **ARI 311K. Visual Communication I.**

Restricted to students in the School of Architecture. Introduction to freehand drawing and the fundamentals of two- and three-dimensional visual design. Includes exercises in color theory and application, formal and spatial studies, life drawing and building sketching, and the principles of linear perspective. Employs a variety of media. Six hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architectural Interior Design 310K.

### **ARI 311L. Visual Communication II.**

Restricted to students in the School of Architecture. Study and application of drawing and other communication skills for designers. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.

### **ARI 318K. Interiors and Society.**

Concepts, principles, and elements of interior design, presented in artistic, philosophical, and professional contexts. Includes a basic historical overview of the development of interior design. Three lecture hours a week for one semester. Prerequisite: For students in the School of Architecture, none; for others, consent of instructor.

### **ARI 318M. Interior Design History.**

Survey of interior design from antiquity through the eighteenth century, including theoretical, social, technical, and environmental forces. Three lecture hours a week for one semester. Prerequisite: Architectural Interior Design 318K with a grade of at least C.

## **Upper-Division Courses**

### **ARI 320K. Design III--Interiors.**

Restricted to students in the School of Architecture. Focus on the physical and psychological needs of the inhabitants of interior space. Emphasis on conceptual process and diagrammatic techniques. Projects deal with real building situations and introduce implications of fenestration, structure, and materials. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L, or Architecture 310L and 311L, with a grade of at least C in each.

### **ARI 520L. Design IV--Interiors.**

Restricted to students in the School of Architecture. Explores linkages between multiple interior spaces and the study of spatial thresholds. Investigates individual spaces in relation to the body and the surrounding environment, utilizing a clearly defined program. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 320K, Architecture 415K, and Architectural Interior Design 221K or Architecture 221K, with a grade of at least C in each.

### **ARI 221K. Visual Communication III.**

Restricted to students in the School of Architecture. Introduction to digital tools for communicating design, with an emphasis on integrating digital image, CAD, and 3-D software processes with hand drawing and modeling techniques. Topics include manipulation of digital images, combination of text and image, rendered perspectives, measured drawings, and an introduction to 3-D modeling. Use of advanced visual language. Some projects are based on work done in the student's design studios. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and

311L, or Architecture 310L and 311L, with a grade of at least C in each.

### **ARI 324K. Environmental Controls I.**

Restricted to architectural interior design majors. A survey of acoustics, color, light, illumination, and electrical and information systems in architectural interiors. Includes techniques of documentation. Three lecture hours and three laboratory hours a week for one semester. Architectural Interior Design 324K and Architecture 334K may not both be counted. Prerequisite: Architectural Interior Design 520L or Architecture 520L with a grade of at least C.

### **ARI 130. Interior Design Internship.**

Practical application of design procedures in a professional design office. At least 250 hours of work in one semester. Prerequisite: Architectural Interior Design 530T.

### **ARI 530K. Design V--Interiors.**

Examination of the elements of interior space and scale, including specific human factors. Particular emphasis on the design, documentation, production, and placement of objects in interiors. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 520L and 434K with a grade of at least C in each.

### **ARI 530T. Design VI--Interiors.**

Capstone studio with projects that are specific design situations from current markets. Application of code issues, regulatory restraints, fire safety, and regulations for accessibility in interiors. Fifteen hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 324K and 530K with a grade of at least C in each.

### **ARI 434K. Construction II--Interior Materials and Assemblies.**

Restricted to students in the School of Architecture. Core concepts in interior materials, assemblies, and systems. Includes material properties, environmental and sustainable issues, attachment, detailing, and product specifications. Projects encourage manipulation and assembly of various material systems. Case studies using material samples, and field trips to sites of fabrication. Six hours of lecture and laboratory a week for one semester. Prerequisite: Architecture 415K with a grade of at least C.

### **ARI 338. Designing for Human Behavior.**

Issues of mood, privacy, perception, proxemics, and preferences applied to the design of interiors. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **ARI 350R. Topics in Interior Design Theory.**

Seminar in a variety of topics. Designed to broaden the student's knowledge of interior design and to encourage critical and theoretical thinking in the discipline. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **ARI 560R. Advanced Interior Design.**

Synthesis of components covered in other interior design courses, such as human aspects, place-making, the interior envelope, transitional spaces, and conceptual processes. These components form a basis for addressing specific topics related to interiors. Fifteen hours of lecture and studio a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Architectural Interior

Design 530T with a grade of at least C and satisfactory completion of a third-year portfolio review.

### **ARI 362. Interior Design Practice.**

Restricted to students in the School of Architecture. Business procedures, professional practice, design project control and management, and professional ethics. Documents procedures for interior design. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **ARI 368R. Interior Design History II.**

Study of function and aesthetics, and decoration and use, emphasizing interiors from the nineteenth century to the present. Three lecture hours a week for one semester. Prerequisite: Architectural Interior Design 318M with a grade of at least C.

### **ARI 279, 379. Interior Design Research.**

Investigation of problems selected by the student with approval of the supervising instructor. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Upper-division standing and consent of instructor and the dean.

## **Architecture: ARC**

### **Lower-Division Courses**

#### **ARC 301D. Connecting Research Experience.**

Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.

#### **ARC 001F. First-Year Interest Group Seminar.**

Restricted to students in the First-Year Interest Group Program. Basic issues in various School of Architecture disciplines. One lecture hour a week for one semester.

#### **ARC 308 (TCCN: ARCH 1311). Architecture and Society.**

Introduction to the social contexts, potential, and consequences of architecture and interior design. Three lecture hours and one laboratory hour a week for one semester.

#### **ARC 310K. Design I.**

Restricted to students in the School of Architecture. Introduction to forms and methods of architectural design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Nine hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architecture 311K.

#### **ARC 310L. Design II.**

Restricted to students in the School of Architecture. Introduction to forms and methods of architectural design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.

#### **ARC 311K. Visual Communication I.**

Restricted to students in the School of Architecture. Study and application of drawing and other communication skills for architects.

Six hours of lecture and studio a week for one semester. Prerequisite: Concurrent enrollment in Architecture 310K.

#### **ARC 311L. Visual Communication II.**

Restricted to students in the School of Architecture. Study and application of drawing and other communication skills for designers. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310K and 311K, or Architecture 310K and 311K, with a grade of at least C in each.

#### **ARC 415K. Construction I.**

Restricted to students in the School of Architecture. Introduction to building construction, materials, and structures. Three lecture hours and three laboratory hours a week for one semester.

#### **ARC 415L. Construction II.**

Restricted to students in the School of Architecture. Analysis of building assemblies, envelope design, and structures. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architecture 415K with a grade of at least C; Mathematics 408C, or 408K and 408L; and Physics 302K and 102M, or 303K and 103M.

#### **ARC 318K (TCCN: ARCH 1301). World Architecture: Origins to 1750.**

Comparative study of the architecture of the ancient world, including Asia, Africa, the Americas, and Europe. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Architecture 308 with a grade of at least C.

#### **ARC 318L (TCCN: ARCH 1302). World Architecture: The Industrial Revolution to the Present.**

Three lecture hours a week for one semester. Prerequisite: Architecture 318K with a grade of at least C.

### **Upper-Division Courses**

#### **ARC 320C. Connecting Research Experience.**

Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.

#### **ARC 320K. Design III.**

Restricted to students in the School of Architecture. Intermediate-level studio addressing spatial, tectonic, environmental, social, and theoretical issues in architectural design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Nine hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L, or Architecture 310L and 311L, with a grade of at least C in each.

#### **ARC 520L. Design IV.**

Restricted to students in the School of Architecture. Intermediate-level studio addressing urban design and building design. Taught in a studio format by faculty members under the direction of a faculty coordinator. Fifteen studio hours a week for one semester. Prerequisite: Architecture 415K, 320K, and Architectural Interior Design 221K or Architecture 221K, with a grade of at least C in each.



### **ARC 520M. Design V.**

Restricted to students in the School of Architecture. Intermediate-level studio with an emphasis on theory and research. Taught in a studio format by faculty members under the direction of a faculty coordinator. Fifteen studio hours a week for one semester. Prerequisite: Architecture 415L and 520L with a grade of at least C in each.

### **ARC 221K. Visual Communication III.**

Restricted to students in the School of Architecture. Introduction to digital tools for communicating design, with an emphasis on integrating digital image, CAD, and 3-D software processes with hand drawing and modeling techniques. Topics include manipulation of digital images, combination of text and image, rendered perspectives, measured drawings, and an introduction to 3-D modeling. Use of advanced visual language. Some projects are based on work done in the student's design studios. Six hours of lecture and studio a week for one semester. Prerequisite: Architectural Interior Design 310L and 311L, or Architecture 310L and 311L, with a grade of at least C in each.

### **ARC 128C, 228C, 328C. Advanced Connexus Forum Seminar Series.**

Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on multidisciplinary perspectives, research, and critical discourse. For 128C, two lecture hours a week for eight weeks; for 228C, two lecture hours a week for one semester; for 328C, three lecture hours or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

### **ARC 530T. Design VI.**

Restricted to students in the School of Architecture. Intermediate-level studio addressing the requirements of sound buildings--their programmatic, spatial, and tectonic resolution and their relationships to the physical and social context of the site. Taught in a studio format by faculty members under the direction of a faculty coordinator. Fifteen studio hours a week for one semester. Prerequisite: Architectural Interior Design 324K, and Architecture 520M and 435K, with a grade of at least C in each.

### **ARC 333. Site Design.**

Restricted to students in the School of Architecture. History, theory, and technique of landscape design, with emphasis on the relationship of a building to its landscape. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **ARC 334K. Environmental Controls I.**

Restricted to architecture majors. Environmental issues in general and the environmental imperative of architecture. Emphasis on quantitative aspects of the fundamental principles of physics required in the areas studied in Architecture 334L. Three lecture hours and three laboratory hours a week for one semester. Architectural Interior Design 324K and Architecture 334K may not both be counted. Prerequisite: Architecture 520L with a grade of at least C.

### **ARC 334L. Environmental Controls II.**

Restricted to students in the School of Architecture. A survey of heating, ventilating, air conditioning, vertical transportation, and wiring and plumbing systems in buildings, including techniques of

documentation. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Architectural Interior Design 324K with a grade of at least C.

### **ARC 435K. Construction III.**

Restricted to students in the School of Architecture. Theories of building construction and materials; structural component analysis and design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architecture 415L with a grade of at least C, and Physics 302L and 102N.

### **ARC 435L. Construction IV.**

Restricted to students in the School of Architecture. Theories of building behavior and materials; structural system analysis and design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Architecture 435K with a grade of at least C.

### **ARC 335M. Construction V.**

Restricted to students in the School of Architecture. Advanced analysis of building envelope, assemblies, detailing, and specifications. Three lecture hours a week for one semester. Prerequisite: Architecture 435L with a grade of at least C.

### **ARC 350R. Topics in Design Theory.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The Modern American City.** Same as Geography 337 and Urban Studies 352 (Topic 1: The Modern American City). Issues facing residents of United States cities, such as transportation and housing, poverty and crime, metropolitan finance, environmental and architectural design; historical/comparative urban evolution. Prerequisite: Upper-division standing.

**Topic 2: American Dream: Status Quo and Alternatives.** Same as Urban Studies 352 (Topic 2: American Dream: Status Quo and Alternatives).

**Topic 3: Urban Design Practice.** Same as Urban Studies 352 (Topic 3: Urban Design Practice).

**Topic 4: Economy/Value/Quality of Life.** Same as Urban Studies 352 (Topic 4: Economy/Value/Quality of Life).

### **ARC 351R. Visual Communication.**

Advanced problems for the refinement of visual communication skills and architectural presentation methods, including drawing, photography, and computer-aided graphics. Three lecture hours or six studio hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Architecture 520L.

**Topic 1: Computer Applications in Design.** Six studio hours a week for one semester.

**Topic 2: Introduction to Computer Applications.** Six studio hours a week for one semester.

**Topic 4: Composition, Presentation, and Portfolio.** Three lecture hours a week for one semester.

**Topic 5: Descriptive Geometry.** Three lecture hours a week for one semester.

**Topic 6: Drawing Clinic.** Three lecture hours a week for one semester.

**Topic 7: Introduction to Computer Imaging.** Three lecture hours a week for one semester.

**Topic 8: Seeing Things: General Drawing.** Three lecture hours a week for one semester.

**Topic 9: Solid Geometry Drawing.** Three lecture hours a week for one semester.

**Topic 10: Visual Communication Exercises.** Three lecture hours a week for one semester.

**Topic 11: Wood Design.** Three lecture hours a week for one semester.

### **ARC 560R. Advanced Design.**

Restricted to students in the School of Architecture. Advanced problems in architectural design. Fifteen hours of lecture and studio a week for one semester. May be repeated for credit when the topics and instructors vary. Prerequisite: Architecture 530T with a grade of at least C and satisfactory completion of third-year portfolio review.

### **ARC 560T, 660T. Advanced Design.**

Restricted to students in the School of Architecture. Comprehensive studio to develop the student's ability to combine the elements that create a thorough building design. For 560T, fifteen studio hours a week for one semester; for 660T, eighteen studio hours a week for one semester. Prerequisite: Architecture 560R with a grade of at least C.

### **ARC 361T. Technical Communication.**

Restricted to students in the School of Architecture. Studio to produce construction documents for buildings designed in Architecture 560T. Six studio hours a week for one semester. Prerequisite: Architecture 560R with a grade of at least C.

### **ARC 362. Professional Practice.**

Restricted to students in the School of Architecture. Ethical, legal, and administrative responsibilities of the architect; organizations, processes, and roles in architecture. Three lecture hours a week for one semester. Prerequisite: Architecture 560R with a grade of at least C.

### **ARC 368R. Topics in the History of Architecture.**

Restricted to students in the School of Architecture. Seminars and lecture/seminars on advanced topics in the history of architecture. Topics address medieval, Renaissance, Latin American, Asian, and nineteenth- and twentieth-century history of architecture, and historiography of architecture. Three lecture/seminar hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Architecture 318L.

### **ARC 279, 379, 479, 579. Architectural Research.**

Investigation of problems selected by the student with approval of the supervising instructor. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. A grade of at least C is required for degree credit.

## **Community and Regional Planning: CRP**

### **Upper-Division Courses**

#### **CRP 369K. Principles of Physical Planning.**

Introductory course in the physical dimension of urban planning. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or six semester hours of upper-division coursework.



# Red McCombs School of Business

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Thomas W. Gilligan, PhD, *Dean*

D. Paul Newman, PhD, *Senior Associate Dean, Academic Affairs*

David E. Platt, PhD, *Associate Dean, Undergraduate Program*

Arthur T. Allert, BA, *BSEd, Assistant Dean, Undergraduate Program*

<http://www.mccombs.utexas.edu/bba>

## General Information

### Mission

The undergraduate program of the Red McCombs School of Business seeks to transform the lives of its students through a well-rounded professional education. The challenging curriculum is designed to provide a balanced perspective of business disciplines and a foundation for the lifelong development of an appreciation of the social, technological, and global economic forces shaping the future; the ability to recognize and promote ethical behavior; interpersonal and leadership skills; and the quantitative and analytical skills necessary for professional progress and advanced study.

### History

The School of Business Administration was created in 1922, the outgrowth of the work in business administration first offered in the College of Arts and Sciences in the fall of 1912. In 1945, the school was reorganized as a college; in 2000, the college was renamed in honor of University alumnus and benefactor Red McCombs. The degree of Bachelor of Business Administration was first offered in 1916–1917. The Bureau of Business Research, organized in 1926 as one of the Extramural Divisions of the University, became the research division of the school in September, 1945. In addition to the Bureau of Business Research, the school includes the Departments of Accounting; Business, Government, and Society; Finance; Information, Risk, and Operations Management; Management; Marketing; and the Technology Commercialization program. Coursework in business may lead to the degree of Bachelor of Business Administration and to several advanced degrees, described in the *Graduate Catalog* (<http://registrar.utexas.edu/catalogs>).

### Facilities

The McCombs School is housed in the George Kozmetsky Center for Business Education. This three-building complex includes modern classrooms and offices, lecture rooms with sophisticated multimedia equipment, and conference and study rooms, as well as lounges for informal student and teacher interaction. Computer and computer-access facilities are also available to students, faculty members, and staff members.

### Financial Assistance Available through the School

Students who are enrolled in the McCombs School of Business are eligible for scholarships and awards funded by industry, foundations, and individuals. Some of these awards are available school-wide, while others are restricted to students in one department. Since funds are limited, students selected to receive an award must demonstrate

outstanding academic aptitude and a firm commitment to a business education.

Most scholarships for continuing students are reserved for students who have declared a business major. Generally, one hundred to two hundred school scholarships are awarded annually, in amounts of \$500 to \$2,500; some are renewable. Criteria for awarding scholarships vary to meet the wishes of the donors but often include financial need, academic performance, major area of study, and hometown. Descriptions of school scholarships and applications for them are available on the Undergraduate Program Office Web site in February of each year. The deadline for submission is the end of February for scholarships for the following academic year. Recipients are selected by the Undergraduate Program Office of the school and are usually notified during the summer.

Departmental scholarships are generally reserved for juniors and seniors majoring in a program of the department. Because departmental scholarships are normally funded by annual contributions, the number of scholarships and the amounts awarded vary among departments and over time. Criteria for departmental awards are specified by the donors and include the same kinds of characteristics as those established for school-wide awards; deadlines and other elements of the selection process also vary among departments. Interested students should contact the major department for further information.

### Student Services

The Undergraduate Program Office provides administrative support and student services for the school. Student services include maintenance of student academic records, academic counseling by appointment, development of official degree audits for students, and graduation certification.

### Academic Advising

Upon admission to the McCombs School every undergraduate student is assigned to a professional academic adviser. Academic advisers in the Undergraduate Program Office provide individualized, comprehensive advising and serve as a referral resource to students to ensure timely progress toward degree completion. Faculty advisers are also available in each academic department to help students explore their educational and career goals.

All students are encouraged to meet regularly with their assigned advisers. However, those who have been enrolled in the school for at least one semester are permitted to self-advise and register without consulting an academic adviser. To be eligible to self-advise, the student must have a University grade point average of at least 2.00. Like all undergraduate students, those who self-advise are responsible for knowing the requirements of the degree program they have chosen, for enrolling in courses appropriate to that degree program, for meeting the prerequisites of the courses selected, and for taking courses in the proper sequence to ensure timely progress toward the degree. See Student Responsibility (p. 18) in The University section for more information.

### Career Services

BBA Career Services offers job search assistance to business students. The purpose of the office is to help students determine their career goals, develop a plan for achieving these goals, and select and obtain employment commensurate with their goals, interests, and training. To help students prepare for their career search, the office

presents workshops on résumé writing, interviewing, conducting a job search, evaluating offers, and other career interest areas.

In addition to the career-related workshops, the BBA Career Advising team also teaches the required courses Business Administration 101S and 101T to freshmen and transfer students. The purpose of these courses is to assist business students with planning, implementing, and evaluating their careers. These courses are designed to provide students with the foundations for executing a successful job search and focus on career management as a lifelong process. After completing these courses, students can implement job search strategies and interviewing techniques in pursuing internship and full-time employment opportunities.

Most students obtain their internship, which is a required part of the undergraduate business curriculum, at the end of their junior year. However, BBA Career Services encourages freshmen and sophomores to attend its recruiting activities and events, which can help them obtain various internships prior to the required internship. These experiences can help students develop their résumés and job search skills.

The office maintains a career resource library of company literature, employment information, and general business publications for students' use. About fourteen thousand individual interviews for internships and full-time opportunities are arranged annually with employers in business, industry, government, and not-for-profit organizations. Several hundred firms conduct on-campus interviews at the McCombs School each year.

To assist employers, the office provides résumé searches among graduating seniors seeking full-time positions and among juniors seeking internships; these are sent to organizations nationwide that request them. The office also coordinates about three hundred receptions and information sessions each year.

Another resource for employers, students, and alumni is the online *McCombs Job Board*. The *Job Board* helps recruiters reach business alumni and current students. It complements the on-campus recruiting program by allowing companies to recruit candidates for a wide variety of roles in their organizations throughout the calendar year.

More information about BBA Career Services is provided by the McCombs School at <http://www.mcombs.utexas.edu/career/>.

As a complement to the assistance available from the school, the Sanger Learning Center provides comprehensive career services to all University students. The center offers professional assistance to students in choosing or changing their majors or careers, seeking an internship, and planning for the job search or for graduate study.

The University makes no promise to secure employment for each graduate, but rather provides the tools and resources to ensure that students have access to employment opportunities.

## Student Organizations

Student organizations play a vital role in the educational experience offered by the University. Students who become involved in organizations gain experience in leadership, teamwork, networking, time management, and other practical areas. This experience, when combined with the theoretical knowledge gained in the classroom, helps students develop a well-rounded set of skills for use academically, professionally, and personally.

The Undergraduate Business Council (UBC) is the governing student body in the school. It is made up of representatives from each McCombs affiliated student organization, an executive board, representatives elected by the student body, and members appointed by the executive board. The UBC acts as a representative of all undergraduate business students and sponsors programs such as Family Day, the VIP Lecture Series, and the Faculty Honor Roll.

Business student organizations sponsor professional activities such as guest lectures, field trips, and faculty chats; many offer social activities as well. The McCombs affiliated student organizations are American Marketing Association, Asian Business Students Association, International Association of Students in Economics and Commerce (AIESEC), Association of Latino Professionals in Finance and Accounting, Alpha Kappa Psi, BBA Energy Finance, Beta Alpha Psi, Black Business Student Association, Business Healthcare Association, Business International Student Association, Business Transfer Student Association, Delta Sigma Pi, Diversity and Inclusion Student Council, Engineering Route to Business Leadership Council, Freshmen Business Association, Global Business Brigades, Global Investment Group, Honors Business Association, Hispanic Business Students Association, Jewish Organization at the Business School, Management Information Systems Association, National Association of Black Accountants, Net Impact, Phi Beta Chi, Phi Chi Theta, Student Consulting Initiative, Return on Investment, Texas Analyst Association, Supply Chain Management Student Organization, Tech Connects, Undergraduate Real Estate Society, University Accounting Association, University Finance Association, and Women in Business Association.

## Study Abroad

The BBA International Programs office offers McCombs School of Business students the opportunity to study abroad on exchange programs at twenty-nine partner schools in twenty-four countries around the globe. The exchange programs enable students to make progress toward their University degree requirements while gaining valuable intercultural experiences. More information is available at <http://www.mcombs.utexas.edu/bba/ip/>.

## Leadership Development Program

The Leadership Program (LP) gives students access to unique leadership development programs and activities. All business majors who are not in the Business Honors Program and are freshmen, sophomores, or transfer students may apply. The LP requires a four-year commitment from freshmen and a three-year commitment from sophomores and transfer students. The primary goal of the Leadership Program is to enhance student learning and development as it relates to self-knowledge and leadership competence, and to expand the student's leadership portfolio during his or her time at the McCombs School of Business.

Admission to the Leadership Program is limited to a small number of students who are chosen on a competitive basis each year. More information and an online application form are available at <http://www.mcombs.utexas.edu/BBA/OSL/Leadership-Development/Leadership-Program.aspx>.

# Admission and Registration

## Admission

### Admission Policies of the School

Admission and readmission of undergraduate students to the University is the responsibility of the University director of admissions. Information about admission to the University is given in *General Information* (<http://registrar.utexas.edu/catalogs>).

Each year there are more qualified applicants to the McCombs School than can adequately be instructed by the faculty or accommodated within existing facilities. To provide students with the best educational experience possible, the school must limit undergraduate admission. Therefore, admission to the school is extremely competitive and admission requirements are more stringent than those of the University. As a result, a student may be admitted to the University but denied admission to the school. The student must be admitted to the school to pursue a degree program described in this chapter.

Admission to the school is granted for the fall semester and summer session only. Students admitted for fall are expected to attend Orientation the summer before they enter the school.

### Freshman Admission Requirements for Texas Residents

To be considered for admission to the school, Texas-resident high school students must be granted regular admission to the University. However, because enrollment is limited by the availability of instructional resources, admission requirements for business degree programs are more restrictive than those of the University. High school rank, SAT Reasoning Test or American College Testing Program (ACT) scores, extracurricular activities, and essays are among the factors used in making admission decisions. A student who is admitted to the University but denied admission to the school may seek admission to another academic program at the University.

### Freshman Admission Requirements for Nonresidents

Because of enrollment restrictions dictated by the availability of faculty and facilities in the school and by the limitations on nonresident enrollment imposed by the Board of Regents, nonresident applicants may find the admission process extremely competitive.

### Application Procedures for Freshman Admission

Students may apply for admission through the Office of Admissions Web site, <http://bealonghorn.utexas.edu>. To be considered for admission to the McCombs School of Business, the student should specify business as his or her intended major. All application materials must be submitted to the Office of Admissions by the deadline to apply for admission to the University for the summer session or fall semester; these dates are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

### Admission with Deficiencies

Students who were admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information* (<http://registrar.utexas.edu/catalogs>). Credit used

to remove a deficiency may not be counted toward the degree. It may be earned on the pass/fail basis. Students may not claim a major until high school unit deficiencies have been removed.

### Foreign Language Proficiency

Each student must provide evidence that he or she has fulfilled the foreign language proficiency requirement for the Bachelor of Business Administration degree. Students may not claim a major until the foreign language proficiency requirement has been met.

### Admission-to-Major Requirements for Students Previously Enrolled in the School

A former student who was most recently enrolled in the McCombs School of Business and who is readmitted to the University reenters the major in which he or she was last enrolled. However, a former business student who has earned a Bachelor of Business Administration degree at the University is readmitted with the classification "degree holder but nondegree seeker."

A former student who was most recently classified as a prebusiness student will be readmitted to the transitional student classification. The student may then apply for admission to a business major according to the procedures given in the section Internal Transfer.

## Transfer

### Internal Transfer

Students enrolled in other degree programs at the University who wish to enter a degree program described in this chapter must submit an application for a change of major to the Undergraduate Program Office by May 15 to be considered for admission in the following fall semester. The following minimum requirements for consideration are in addition to the requirements to transfer from one division to another that are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

1. Completion of twenty-four semester hours of coursework in residence on the letter-grade basis by the end of the preceding spring semester
2. Completion of Mathematics 408K and 408L, Mathematics 408N and 408S, or Mathematics 408C and 408D, or the equivalent
3. Completion of Economics 304K and 304L
4. Completion of the foreign language proficiency requirement of two years of a single foreign language in high school or one year of a single foreign language in college
5. A grade point average of at least 3.00 on University in-residence coursework

Admission is granted on a space-available basis and may not be possible if instructional resources are not compatible with enrollment demands. A student with a grade point average of less than 3.40 is unlikely to be admitted to the school.

### External Transfer

A student seeking to transfer to the McCombs School of Business from another university should list business as his or her intended major on the admission application. Because students are not admitted to the school for the spring, application materials must be submitted to

the Office of Admissions by the appropriate deadline for the student to be considered for admission in the following fall semester. The following minimum requirements for consideration are in addition to the requirements for transfer admission that are given in *General Information*.

1. Completion of Mathematics 408K and 408L, Mathematics 408N and 408S, or Mathematics 408C and 408D, or the equivalent
2. Completion of Economics 304K and 304L
3. Completion of the foreign language proficiency requirement of two years of a single foreign language in high school or one year of a single foreign language in college
4. A grade point average of at least 3.00 on transferable college credit

Because of enrollment restrictions dictated by the availability of faculty and facilities in the school and by the limitations on nonresident enrollment imposed by the Board of Regents, an applicant may be denied admission to the McCombs School even though he or she meets University transfer requirements. Such an applicant may seek admission to another academic program at the University. A student with a grade point average of less than 3.50 is unlikely to be admitted to the McCombs School.

## Claiming a Major

Each student is admitted to the McCombs School with an unspecified major. The student may claim a specific business major when he or she has completed thirty semester hours of coursework, including Business Administration 101H, 101S, or 101T, Economics 304K and 304L, Mathematics 408C, 408K, or 408N, and Mathematics 408D, 408L, or 408S; has registered with BBA Career Services; and has fulfilled the foreign language proficiency requirement for the Bachelor of Business Administration degree. All students are required to claim a major before completing seventy-five semester hours. Students may claim their majors online at <https://utdirect.utexas.edu/business/bba/>. A student seeking admission to the integrated MPA or the Business Honors Program must complete a separate application; requirements for admission to these programs are given in Accounting (p. 53) and Business Honors Program (p. 54), respectively.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published before registration each semester and summer session at <http://www.registrar.utexas.edu/schedules/>, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

## Academic Policies and Procedures

### Honors

#### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished

academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

## Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

## School Honors Program

The Business Honors Program is available to outstanding students who have distinguished themselves inside the classroom and out by superior performance during high school or in their first year at the University. The program is described in Business Honors Program (p. 54).

## Graduation

### Special Requirements of the School

All students must fulfill the minimum General Requirements (p. 18) for graduation given in The University section. Business students must also fulfill the following requirements.

1. All University students must have a grade point average of at least 2.00 to graduate. Business students must also have a grade point average in business courses of at least 2.00. Students in the Business Honors Program must have a University grade point average and a grade point average in business courses of at least 3.25. Students in the integrated BBA/MPA program who choose to graduate with both undergraduate and graduate degrees simultaneously must have a grade point average of at least 3.00 in all coursework taken as part of the minimum thirty-six-hour graduate program; they must also have a grade point average of at least 3.00 in graduate accounting coursework. Students may choose to first apply for the undergraduate degree upon completion of all requirements and continue pursuing the MPA.
2. The University requires that at least six semester hours of advanced coursework in the major field of study be completed in residence. For additional requirements, see BBA Degree Requirements (p. 52) given within the Degrees and Programs section of the School of Business.
3. A candidate for a degree must be registered in the McCombs School of Business either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar.

## Degree Audit

The student may request a degree audit in the Undergraduate Program Office when he or she enters a business major. The degree audit is prepared by comparing the degree requirements of the student's major with the student's University record, including transferred work. It shows the coursework required for the major, the courses completed that fulfill requirements, the hours of designated coursework that are still needed, grade point averages, and the residency requirements that have been fulfilled. In preparing the



degree audit, every effort is made to avoid errors, but it is the student's responsibility to be aware of and to fulfill all graduation requirements.

## Applying for Graduation

A degree candidate must apply for the degree no later than the date given in the official academic calendar. No degree will be conferred unless the diploma application form has been properly filed. Further information, resources, and a link to the graduation application are available at <http://www.mcombs.utexas.edu/BBA/Graduation.aspx>. Students are expected, but not required, to complete their degree in a timely manner.

## Degrees and Programs

Degree requirements are listed below under BBA Degree Requirements and under Program Degree Requirements. For a complete list of requirements for a degree, the student should combine the degree requirements in these two sections with the University's minimum General Requirements (p. 18) for graduation and the Special Requirements of the School (p. 52).

### The Minor

While a minor is not required as part of the BBA degree program, the student may choose to complete a minor in either a second business field or a field outside the school. A student may complete only one minor. The minor consists of at least twelve semester hours in a single field, including at least nine hours of upper-division coursework. Students who minor in management information systems may count six hours of lower-division and six hours of upper-division coursework. Students who minor in any area of finance must take Finance 367 as three of the required twelve hours.

Six of the required hours must be completed in residence. A course used to fulfill the requirements of a minor may not be taken on the pass/fail basis unless the course is offered only on that basis. Only one business core course or one course counted toward the Bachelor of Business Administration degree requirements in BBA Degree Requirements may also be counted toward the minor. The internship course may not be counted toward the minor.

The McCombs School allows the student to minor in any field in which the University offers a major. However, prerequisites and other enrollment restrictions may prevent the student from minoring in some fields.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward the Bachelor of Business Administration degree. However, they are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

### ROTC Courses

No more than twelve semester hours of air force science, military science, or naval science coursework may be counted toward the Bachelor of Business Administration degree. ROTC courses may be used only as nonbusiness electives and may be counted toward the

degree only by students who complete the third and fourth years of the ROTC program and accept a commission in the service.

## Courses Taken on the Pass/Fail Basis

A business student may count toward the degree up to four one-semester courses in elective subjects outside the major taken on the pass/fail basis; only electives, nonbusiness electives, and upper-division nonbusiness electives may be taken on the pass/fail basis. Credit earned by examination is not counted toward the total of four courses that the student may take pass/fail.

If a student decides to major in a subject in which he or she has taken a course on the pass/fail basis, it is generally the prerogative of the major department to decide whether the course will be counted toward degree requirements; in the McCombs School of Business, such courses may not be counted toward the major. Complete rules on registration on the pass/fail basis are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

## Correspondence and Extension Courses

Students planning to take correspondence or extension courses should consult with the Undergraduate Program Office before doing so to ensure compliance with the following restrictions.

1. Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere will not be counted toward a business degree unless it is specifically approved in advance by the dean. A student may not be enrolled concurrently for correspondence courses from the University or for correspondence or extension courses from another institution during his or her last semester.
2. Correspondence instruction in the required business core courses may not be counted toward the degree unless specifically approved in advance by the dean.
3. No more than 30 percent of the semester hours required for any degree may be completed by correspondence, extension, or a combination of the two methods.
4. With regard to registration on the pass/fail basis, correspondence and extension courses are subject to the same restrictions as courses taken in residence; these restrictions are given in the section Courses Taken on the Pass/Fail Basis.

## Concurrent Enrollment

To ensure degree applicability, students are urged to consult with their academic advisor before registering concurrently at another institution, either for resident coursework or for a distance education course, and before enrolling in correspondence or extension coursework at the University. A student may not be enrolled concurrently during his or her last semester in any course to be counted toward the degree.

## Certificate Programs

Certificate programs in the McCombs School are designed to allow undergraduate students to develop an area of expertise in addition to their major program. The required number of hours to earn any certificate may vary but may not be fewer than 18 and may not exceed 24. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree receive recognition on the University transcript. At

least half of the required certificate coursework must be completed in residence at the University.

A student may not earn any transcript-recognized certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

## The Business Foundations Program

The Business Foundations Program (BFP) is designed to provide a foundation in business concepts and practice for students in other majors. Any nonbusiness student with a University grade point average of at least 2.00 may take any BFP courses for which he or she meets the prerequisite. No admission process is required.

Students who complete the certificate requirements in either the general track or the global track must also submit a request to the BFP director for a certificate and a letter verifying completion of the program.

The certificate program requires eighteen semester hours of coursework as described below; students must also complete the following prerequisite courses: Economics 304K or 304L or the equivalent, and an introductory statistics course chosen from the list of approved courses available on the BFP Web site.

### General Track

The certification requirements are:

1. The following courses completed in residence:
  - A. Accounting 310F; or both Accounting 311 and 312.
  - B. Management Information Systems 301, 302F, or 310.
2. Finance 320F.
3. Three of the following four courses: International Business 320F, Legal Environment of Business 320F, Management 320F, Marketing 320F.
4. Two of the four courses taken to fulfill requirements 2 and 3 above, with the exception of Legal Environment of Business 320F, may be taken in an approved study abroad program. A list of approved programs is available in the Study Abroad offices.
5. The student must complete the prerequisite courses and the courses used to fulfill requirements 1 through 3 on the letter-grade basis. He or she must earn a grade point average of at least 2.00 in these courses. Credit by exam is allowed for Economics.
6. The student must complete at least two long-session semesters in residence.

### Global Track

The certification requirements are:

1. Proficiency in a modern foreign language, demonstrated by earning nine semester hours of credit beyond course 507 or the equivalent in the language. Three of these hours must be in an upper-division course in grammar and composition.
2. Completion of at least one semester in an approved study abroad program. A list of approved programs is available in the business Study Abroad offices.
3. The following courses, completed in residence:

- A. Accounting 310F; or both Accounting 311 and 312.
- B. Management Information Systems 301, 302F, or 310.

4. International Business 320F. This course is required to complete the Global Track.
5. Finance 320F.
6. Two of the following three courses: Legal Environment of Business 320F, Management 320F, Marketing 320F.
7. Two of the three courses taken to fulfill requirements 5 and 6 above, with the exception of Legal Environment of Business 320F, may be taken in an approved study abroad program. A list of approved programs is available in the Study Abroad offices.
8. The student must complete the prerequisite courses and the courses listed in requirements 1, 3, 4, 5, and 6 on the letter-grade basis. He or she must earn a grade point average of at least 2.00 in these courses.
9. The student must complete at least two long-session semesters in residence.

Apply online to request your BFP certificate at the beginning of the semester you will complete the program. <http://www.mcombs.utexas.edu/BBA/Business-Foundations>

## Real Estate Certificate

The Real Estate Certificate Program requires eighteen semester hours of coursework as described below; students must also complete the following prerequisite courses: for nonbusiness students, Accounting 310F and Finance 320F; for business students, Finance 357. In addition, nonbusiness students are strongly urged to complete Economics 301, or Economics 304K and 304L. Upon completion of the designated prerequisite course(s), a student with upper-division standing may formally apply to the Certificate Program. Admission to the program is based on students' overall academic record and their performance in the required prerequisite course(s). To gain admission the following semester, students must apply by April 1 for fall and by November 1 for spring.

The certification requirements are:

1. Real Estate 358 and 378K; for finance majors, also Accounting 326 or 378 (approved topics in real estate accounting)
2. Real Estate 376G or Legal Environment of Business 363
3. Three of the following (for finance majors, two of the following):
  - A. Accounting 378 (approved topics in real estate accounting)
  - B. Architectural Engineering 323K, 358, or 366
  - C. Architecture 308, 318K, 318L, 350R (For Architecture 350R, may be repeated where topics vary. Credit for topics is subject to approval.), or 368R (Topics: *History and Theory of Landscape Architecture I; History and Theory of Landscape Architecture II*)
  - D. Community and Regional Planning 369K
  - E. Economics 330T, 334K, or 334L
  - F. Finance 377 (Topic 3: *Security Analysis*) (for finance majors in the REIT Fund Program or the Financial Analysis Program only)
  - G. Geography 310C, 337, 337, 356T (Topic 1: *The Culture of Cities*), or 360G



- H. Legal Environment of Business 363 (for non-finance majors only)
- I. Urban Studies 301 (for urban studies majors only), or 305 (Topic: *Experiencing the City*)
- J. Real Estate 376G (for non-finance majors only)

More information is available in the section on Skills and Experience Flags (p. 24).

1. A grade point average of at least 2.00 is required on all work undertaken at the University for which a grade or symbol other than Q, W, X, or CR is recorded. In addition, a grade point average of at least 2.00 in business courses is required. The official grade in a course is the last one made; however, if a student repeats a course and has two or more grades, all grades and all semester hours are used to calculate the University grade point average and to determine the student's scholastic eligibility to remain in the University and his or her academic standing in the McCombs School of Business.

A student may not repeat for credit or grade points any course in which he or she has earned a grade of C or higher (or the symbol CR, if the course was taken on the pass/fail basis).

2. A candidate for the BBA degree must be enrolled in the McCombs School in the semester or summer session in which the degree is awarded.
3. Each student is expected to complete the courses required for his or her major and to meet the curriculum requirements described in items 4 through 7 below in the year specified.
4. During their freshman and sophomore years, students must complete the University's Core Curriculum (p. 22) requirements.
5. Students must complete the following BBA degree requirements during the freshman year:
  - A. Mathematics 408C and 408D, or 408K and 408L, or the equivalent. This coursework may also be used to fulfill the mathematics requirement of the core curriculum.
  - B. Economics 304K and 304L. Economics 304K may also be used to fulfill the social and behavioral sciences requirement of the core curriculum.
  - C. Management Information Systems 301, a business core course.
  - D. Three semester hours of coursework in anthropology, psychology, or sociology, chosen from approved courses; courses dealing primarily with statistics or data processing may not be used to fulfill this requirement.
  - E. Business Administration 101H, 101S, or 101T. Entering freshmen take Business Administration 101S, entering transfer students take Business Administration 101T, and entering business honors students take Business Administration 101H. Because each course is offered only once a year, failure to take the course in the proper semester will prevent the student from declaring a major and progressing toward the degree.
6. Students must complete the following business core courses during the sophomore year:
  - A. Accounting 311 and 312.
  - B. Statistics 309.
  - C. Business Administration 324.
7. Eighteen semester hours beyond the first two years are specified as follows:
  - A. Business core courses:

## Supply Logistics Optimization Certificate

The following four courses for business and nonbusiness students are prerequisites for application to the Supply Logistics Optimization Certificate Program:

1. Mathematics 408C and 408D (for business and nonbusiness students)
2. Mechanical Engineering 205 and 335, or the equivalent (for nonbusiness students)
3. Statistics 309 and Management Information Systems 301 (for business students)

Upon completion of these courses, a student with upper-division standing may formally apply to the certificate program. Admission to the program is based on students' overall academic record and their performance in the four prerequisite courses. To gain admission the following semester students must apply by April 1 for fall and by November 1 for spring.

The certification requirements are twenty-one semester hours of coursework as described below:

1. Operations Management 335, 337 (Topic 3: *Procurement and Supplier Management*), and 368
2. Nine semester hours chosen from Mechanical Engineering 366L, 367S, 373K, 375K
3. Three semester hours chosen from Operations Management 337 (Topic 1: *Total Quality Management*; Topic 2: *Supply Chain Modeling and Optimization*; Topic 4: *Supply Chain Design, Planning, and Control*; Topic 5: *Project Management*), 366P

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22) and the following specific requirements for the BBA, including the requirements of a major. In some cases, a course that is required for the BBA or for a major may also be counted toward the core curriculum; these courses are identified below.

## BBA Degree Requirements

Each student must complete the University's Core Curriculum (p. 22). In the process of completing core curriculum and BBA degree requirements, students must earn credit for one flag in cultural diversity in the United States, one flag in ethics and leadership, one flag in quantitative reasoning, and two flags in writing. Courses may simultaneously satisfy flag and other degree requirements. Except for the cultural diversity in the United States flag, all other required flags are attached to the business core and major courses students must complete to earn a BBA degree. As applicable, students are advised to fulfill the cultural diversity flag requirement that meets another requirement of the core curriculum such as the first-year signature course, American history, or visual and performing arts requirements of the core curriculum. Courses with flags are identified in the *Course Schedule*, available at [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/).

- i Legal Environment of Business 323.
- ii Finance 357.
- iii Marketing 337.
- iv Operations Management 335 or Management 336.
- v Statistics 371G. Finance majors pursuing the quantitative finance track take Statistics 375 or 375H to fulfill this requirement.

B. A professional, business-related internship or practicum course chosen from the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P. Only one internship course may be counted toward the degree.

8. The following requirements apply in addition to those in items 4 through 7 above:

A. Additional coursework to provide a total of at least sixty semester hours outside the McCombs School. At least six of these hours must be at the upper-division level. Students should consult the requirements of their major department for additional information about coursework to be taken outside the school.

B. Completion of the requirements of one of the majors listed in the section Program Degree Requirements. In no event is a degree of Bachelor of Business Administration awarded to a student with fewer than forty-eight semester hours in business, at least twenty-four of which have been completed in residence on the letter-grade basis at the University. At least twelve semester hours of upper-division coursework in the major must be completed in residence at the University on the letter-grade basis. For additional residence requirements, see the University's minimum General Requirements (p. 18) for graduation given in The University section.

9. Proficiency in a foreign language equivalent to that shown by the completion of the first two semesters taught at the University. This requirement may be fulfilled either by completion of the two high school units in a single foreign language that are required for admission to the University as a freshman or by the demonstration of proficiency at the second-semester level. Credit earned at the college level to achieve the proficiency may not be counted toward the degree. It may be earned on the pass/fail basis.

## Accounting

Two programs are available to students who wish to study accounting at the University. The first is the four-year major in accounting leading to the Bachelor of Business Administration degree. The second is the five-year integrated approach to the Master in Professional Accounting degree, which leads to the award of both the BBA and the Master in Professional Accounting degrees. The objective of the BBA accounting curriculum is to provide students with a broad overall education, solid grounding in the common body of knowledge of business administration, and exposure to accounting in sufficient depth to help them achieve entry-level competence for pursuit of a career in

industry. The integrated approach is designed for students who wish to concentrate in accounting and obtain education in an accounting specialization.

## Bachelor of Business Administration

The requirements of this program are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. Twenty-one semester hours of accounting: Accounting 311, 312, 326, 327, 329, 362, and 364.
3. Economics 420K.
4. Operations Management 335 and 374.
5. Additional elective coursework, if necessary, to provide a total of at least 121 semester hours.

## BBA/MPA: Integrated Approach

The integrated approach to the Master in Professional Accounting is a five-year program of undergraduate and graduate coursework that allows the student to earn the BBA and the Master in Professional Accounting (MPA) degrees. The professional curriculum, which usually begins in the student's junior year, includes specially designed accounting courses taught in relatively small classes by full-time faculty members.

The accounting faculty has designed three concentrations within this program: auditing/financial reporting, managerial accounting/control, and taxation. Each concentration is a sequence of courses that offers strong preparation for a particular career path. In addition, the student may choose a generalist curriculum.

Because MPA graduates are expected to become leaders in the accounting profession, highly motivated students with the personal qualities and intellectual capacity to establish successful careers in public accounting, industry, not-for-profit organizations, and higher education are encouraged to apply.

## Admission

Students are admitted to the integrated approach according to the following requirements. Admission is granted only for the fall semester; June 1 is the application deadline for those who wish to begin the program the following fall. Students interested in this program must have met the following requirements by the June 1 deadline: the foreign language proficiency requirement for the BBA degree; and completion of at least sixty semester hours of coursework, including Accounting 311 and 312, Business Administration 101H, 101S, or 101T, Economics 304K and 304L with a grade of C or better, and Mathematics 408C or 408K with a grade of C or better, and Mathematics 408D or 408L with a grade of C or better. As stated in the BBA Degree Requirements, "A student may not repeat for credit or grade points any course in which he or she has earned a grade of C- or higher." Students who earn a D+ or lower in one or more of the courses listed above for admission may retake the course(s), but subsequent attempts will not be considered for admission purposes.

Admission is based on the applicant's University grade point average and SAT Reasoning Test or ACT scores, as well as other relevant examples of academic ability and leadership. An applicant with a University grade point average of less than 3.00 is unlikely to be admitted to this program. Admission may be restricted by the availability of instructional resources. Application

materials and information about deadlines are available at <http://www.mcombs.utexas.edu/mpa/integrated-mpa>.

Before beginning the fifth year, integrated approach students must be admitted to the MPA program. Students must complete at least two long-session semesters in residence in the MPA program. Application forms must be submitted by February 1 of the student's fourth year. Students must have completed the following BBA degree requirements before the application deadline: Rhetoric and Writing 306, English 316K, and Business Administration 324. They must also earn an acceptable score on the Graduate Management Admission Test (GMAT) and have their test scores sent to the University's Office of Admissions. Students usually take the GMAT in the fall or winter of their fourth year.

## Satisfactory Progress

Students are expected to make continuous progress toward the degree by completing required accounting coursework each semester. Students who fail to take required accounting coursework two long-session semesters in a row will be removed from the program and placed in the unspecified business major. Students will be notified before this action is taken; they must meet with their academic adviser upon being notified.

## Probation

A student is placed on probation if his or her grade point average in core undergraduate accounting courses falls below 3.00. Except with the consent of the MPA Program Office, a student on probation may not take graduate accounting courses.

## Dismissal

The student is dismissed from the integrated approach if (1) he or she fails to improve his or her academic performance significantly while on probation, or (2) he or she will not achieve a grade point average of 3.00 even by earning grades of *A* in all remaining core undergraduate accounting courses.

## Graduation

A student may elect to receive the BBA upon completion of all undergraduate requirements. The additional requirements for graduation pertaining to the BBA degree are given in Graduation (p. 49). To receive an MPA degree, a student must have a grade point average of at least 3.00 in all coursework taken as part of the minimum thirty-five hour MPA degree. He or she must also have a grade point average in graduate accounting coursework of at least 3.00.

## Degree Requirements

The requirements for the BBA/MPA program are:

1. Undergraduate coursework
  - A. The core curriculum requirements described in chapter 2 and the BBA degree requirements given in Degrees and Programs. Because the integrated approach includes a graduate-level internship course, students may forgo the undergraduate internship course described in requirement 7e of the BBA degree requirements.
  - B. Economics 420K.
  - C. Operations Management 335 and Management 336 and 374.

- D. The following courses: Accounting 151, 152, 355, 356, 358C, and 359.
- E. For students in the auditing/financial reporting, managerial accounting/control, or generalist concentration, Finance 367 and a business elective; for students in the taxation concentration, Finance 367 and three semester hours of coursework in Legal Environment of Business or Business, Government and Society approved by the student's academic adviser.
- F. Additional elective work, if necessary, to provide a total of at least 120 semester hours of undergraduate coursework.

### 2. Graduate coursework

- A. Accounting 380K (Topic 1: *Financial Accounting Standards and Analysis I*) and 380K (Topic 13: *Information Technology for Accounting and Control*).
- B. Twenty-nine additional semester hours of graduate coursework, including at least twelve hours in accounting and no more than six hours outside business. The student's academic adviser must approve coursework in the student's concentration in advance.

More information is available at <http://www.mcombs.utexas.edu/mpa/integrated-mpa>.

## Business Honors Program

The Business Honors Program is designed to provide an intellectual challenge for students who have distinguished themselves academically and in leadership roles outside the classroom. The student may choose a general program of study or choose to combine the general program of study with an additional major. Business Honors Program students take fourteen business courses in special sections open only to them. Additional information is available from the Business Honors Program Office.

## Admission

Admission to the Business Honors Program is limited to a small number of exceptional students who are chosen on a competitive basis. Admission decisions are made by the Business Honors Program Committee. Most students enter the program as freshmen, but some are admitted as sophomores.

Students entering the University and the McCombs School of Business as freshmen may apply to the Business Honors Program by completing a separate online application available through the UT Office of Admissions. The Business Honors Program Committee considers the student's SAT Reasoning Test or ACT scores, high school class rank, preparatory courses, extracurricular activities, evidence of leadership ability, and other objective criteria.

Students may also seek admission to the Business Honors Program during the spring semester of their freshman year to begin taking courses as a sophomore. To be considered for admission, the student must have completed in the fall and spring semesters of the freshman year at least twenty-four semester hours of college-level coursework; this coursework must include Economics 304K and 304L, Mathematics 408C or 408K, and Mathematics 408D or 408L. The student must also have fulfilled the foreign language proficiency requirement for the BBA degree. In addition to the criteria listed above for freshman

applicants, the Business Honors Program Committee considers the student's grade point average in courses taken in residence at the University and the number, type, and rigor of the courses the student has taken at the University. Students will also be evaluated based upon evidence of their extracurricular activities and leadership abilities. Students applying to the Business Honors Program are permitted to have received credit for Management Information Systems 301; however, no credit will be accepted for other courses normally taken as part of the honors core.

Application materials and information about deadlines are available at <http://www.mcombs.utexas.edu/programs/bhp/>.

## Continuance

A student who enters the Business Honors Program as a freshman must have a grade point average of at least 3.50 on the courses taken in residence during the fall and spring semesters of the first year to continue in the program. The student must complete at least twelve semester hours in residence on the letter-grade basis during each of those two semesters. After the freshman year, each student, whether admitted as a freshman or as a sophomore, is dismissed from the program if his or her overall or business grade point average drops below 3.25. Exceptions are granted only by the Business Honors Program Committee.

## Graduation

To graduate under the Business Honors Program, the student must earn a University grade point average of at least 3.25 and a grade point average of at least 3.25 in business courses.

## Degree Requirements

Business Honors Program students may choose a general program of study, or choose to combine the general program of study with an additional major. Requirements for the general program of study are

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. Completion of the following business core courses and other business courses in special Honors Program sections: Accounting 311H, 312H, 324H and 151H, Finance 357H, Legal Environment of Business 323H, Management 336H and 374H, Management Information Systems 301H, Marketing 337H, Operations Management 335H, and Statistics 309H and 371H/375H.
3. Nine semester hours of upper-division business electives.
4. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## BBA in Science and Technology Management

Science and engineering technology enterprises have a great demand for managers who are not only skilled at business, but who also understand the principles underlying the science, technology, and engineering ventures they must manage. To fill this need, the program of study for the BBA in Science and Technology Management provides a sound foundation in mathematics, in science, and in business, qualifying the student for more advanced study in the management of technological, engineering, and scientific enterprises.

Students work closely with the faculty adviser in the Department of Information, Risk, and Operations Management.

All students must take the courses listed below, with a minimum of forty-eight semester hours in the McCombs School of Business. Prerequisites for all courses are given in this catalog. Other requirements of the Cockrell School of Engineering must also be fulfilled.

The requirements of this program are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52), with the following specifications:
  - A. Students in this program must complete Mathematics 408C and 408D
  - B. Operations Management 335 is required as the upper-division business core course in management
  - C. Only one of the following may be used to satisfy the professional internship requirement: Management Information Systems 353 or 366P; Operations Management 353 or 366P.
2. The following business courses: Accounting 329, Operations Management 337 (Topic 5: *Project Management*), and either Management 374 or Management Information Systems 375
3. One of the following courses: Finance 374C or Finance 374S
4. Three additional hours of business coursework
5. The following non-business courses: Chemistry 301, and Physics 303K, 303L, 103M, and 103N. The physics sequence also meets part I of the core curriculum science and technology requirement. Chemistry 301 also fulfills part II of the core curriculum science and technology requirement.
6. Mathematics 427K
7. The following engineering courses:
  - A. Engineering Mechanics 306 or Mechanical Engineering 320
  - B. Electrical Engineering 302 and 306
  - C. One of the following courses: Aerospace Engineering 374K, Mechanical Engineering 375K or Engineering Studies 377
8. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## Finance

Finance is the study of resource allocation—the process, markets, institutions, and instruments that provide for the transfer of money and wealth. The finance degree program offers students an opportunity to study the finance function in the business firm, the financial services firm, and the financial system.

The finance major presents students with the theoretical framework and analytical tools and techniques to handle a variety of finance and business functions. Students may choose one of six tracks: corporate finance and investment banking, energy finance, investment management, financial markets/banking, quantitative finance, or real estate; students who do not wish to specialize may choose the general finance program.

Corporate finance and investment banking courses are designed to prepare students for careers as associates of corporate treasury



departments, as corporate financial analysts, and as management consultants. Energy finance courses are designed to prepare students for positions in project financing, valuation, and risk management in the energy sector. Investment management courses are designed to give students a background suitable for starting positions as financial analysts with investment funds, investment banks, and other financial institutions. Financial markets/banking courses are designed to prepare students for a variety of financial institution–related careers, such as lending officer and financial analyst. Quantitative finance courses are designed to prepare students for financial analyst positions in research departments of financial institutions and for graduate study in finance. Real estate courses are designed to give students a broad background in valuing and managing real estate; the track is intended to prepare students for positions in real estate commercial brokerage and appraisal, mortgage banking, loan underwriting, real estate development and investment, and property management.

Finance majors may specialize further by completing the Financial Analyst Program (FAP). This one year program allows competitively selected business students to work closely with finance faculty members and industry professionals to develop their skills and experience as analysts. The program may be combined with any of the finance options. More information about FAP is available in the Department of Finance office and at <http://www.mcombs.utexas.edu/Centers/AIM/Financial-Analyst-Program.aspx>.

The requirements of this program are:

1. The Core Curriculum (p. 22) and the BBA Degree Requirements (p. 52).
2. Accounting 326, Finance 367 or 367Q (for students pursuing the quantitative finance option), and 370.
3. Only one independent study may be counted toward the finance major with the exception of the general finance track and the real estate track, which do not allow independent study, as noted below.
4. One of the following:
  - A. *Corporate Finance and Investment Banking*
    1. Finance 374C.
    2. One of the following courses: Accounting 327, 329, 362, or 364.
    3. Two of the following courses: Finance 366P, 371M, 372, 373, 376, 377 (Topic 1: *Portfolio Analysis and Management*), either 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).
  - B. *Energy Finance*
    1. Finance 374C and Finance 377 (Topic 5: *Energy Financial Risk Management*).
    2. Two of the following courses: Finance 366P, 371M, 372, 373, 375F, 376, 377 (Topic 1: *Portfolio Analysis and Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).
  - C. *Investment Management*
    1. Finance 377 (Topic 1: *Portfolio Analysis and Management*).

2. Three of the following courses: Finance 366P, 371M, 372, 373, 374C or 374S, 375F, 376, either 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).

D. *Financial Markets/Banking*

1. Finance 354 or 371M.
2. Three of the following courses: Finance 366P, 372, 373, 374C or 374S, 375F, 376, 377 (Topic 1: *Portfolio Analysis and Management*), either 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).

E. *General Finance*

1. Twelve semester hours of upper-division coursework in finance or real estate. The following courses may not be used to fulfill this requirement: Finance 353, 357, 367, and 370. Finance 354 and Finance 371M may not both be used. Finance 374C and Finance 374S may not both be used. Finance 377 (Topic 2: *Financial Risk Management*) and 377 (Topic 5: *Energy Financial Risk Management*) may not both be used. Finance 377 (Topic 3: *Security Analysis*) and 377 (Topic 4: *Financial Analysis*) may not both be used; Topic 3 is open only to students in the Financial Analyst Program.
2. An independent study course may not be counted toward the general finance option.

F. *Quantitative Finance*

1. Statistics 375 or 375H. Completing this requirement will also fulfill the requirement for the statistics course listed in item 7f of the BBA degree requirements (p. 52).
2. Finance 367Q. Completing this requirement will also fulfill the requirement listed in item 2 of the finance program requirements given above.
3. Finance 374C.
4. Finance 377 (Topic 2: *Financial Risk Management*) or 377 (Topic 5: *Energy Financial Risk Management*).
5. One of the following courses: Finance 371M, 372, 373, 376, 377 (Topic 1: *Portfolio Analysis and Management*), and either 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).
6. One of the following courses: Statistics 372 (Topic 5: *Financial and Econometric Time Series Modeling*), 372 (Topic 6: *Optimization Methods in Finance*), 372 (Topic 7: *Computational Finance*), Management Information Systems 373 (Topic 17: *Data Mining for Business Intelligence*), Finance 366P.

G. *Real Estate*

1. Finance 354 or 371M.
2. Finance 377 (Topic 3: *Security Analysis*) or 377 (Topic 4: *Financial Analysis*).



3. Six semester hours of coursework in real estate. An independent study course may not be counted toward the real estate option

5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

Students must complete the equivalent of at least six semester hours during their study abroad period. Credit earned abroad may be used to fulfill other degree requirements if appropriate. An international internship in the appropriate geographic region which meets the basic internship requirements for all business majors may be used in place of the study abroad requirement with satisfactory documentation and faculty adviser approval.

8. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## International Business

Recognizing the role of the United States in world affairs and the importance of international operations to American business enterprise, this major offers a combination of basic business knowledge with an interdisciplinary study of international policies and practices. The curriculum is designed to help prepare students for positions in global business operations, government, or international agencies in the fields of economic development and international trade.

The requirements of this program are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. Twelve semester hours of coursework beyond the freshman level in a foreign language associated with the area studies specialization used to fulfill requirement 6 below. A minimum of six of the twelve required hours must be at the upper-division level.
3. International Business 350 and 378 (bears the writing flag).
4. Six semester hours chosen from the following courses: Finance 376, International Business 340S, 372, and Marketing 372 (Topic 4: *Global Marketing*). Other courses on the global dimensions of key business areas (e.g. "International Accounting and Taxation") may also be used for this requirement when available, as approved by the international business faculty adviser.
5. Three semester hours of business electives.
6. Nine semester hours of upper-division coursework focused on a specific geographic region. These courses must be approved by the international business faculty adviser. Examples of acceptable fields of study are Latin American studies; Middle Eastern studies; Asian studies; and Russian, East European, and Eurasian studies.
7. All international business majors must study or intern abroad for at least one semester or summer session of no less than six weeks. Students should study or intern in a country or region associated with their foreign language and area studies specialization. Ideally, the study abroad experience should be in an immersion program that includes courses taken with local students.

The international business faculty adviser must approve all study abroad programs in advance. Any McCombs School program is acceptable if it takes place in a country in which English is not the dominant language. (The faculty-led Summer Study Abroad programs will not fulfill this requirement.) In addition, most affiliated study abroad programs available through the University's Study Abroad Office are acceptable, depending on the course of study.

## Management

The Department of Management offers courses in such areas as consulting, change management, human capital management, and entrepreneurship. Students may either choose from the available courses to customize a major in general management or follow the focused curriculum in consulting and change management.

The major objective of the general management track is to train broadly competent administrators for service in a wide variety of organizations—public or private, product- or service-oriented, profit or not-for-profit. To accomplish this basic objective, the program offers the student the opportunity to acquire knowledge about the management of human and physical resources and to acquire skills useful in the management of any organization.

The consulting and change management track is designed to prepare students to become leaders in consulting firms, firms that require consulting advice, and firms implementing important changes. At times, every organization must renew its ability to compete; many firms use external advisers to assist in the renewal process. The consulting process often involves extensive analysis of the firm's competitive position, capabilities, organizational processes, and culture. Once a new direction is developed, the implementation of change must be managed. Such changes include introduction of new competitive thrusts, revision of organizational structures, incorporation of new technologies, and expansion into new geographic markets.

The requirements of the general management track are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. The following courses: Management 336, 374, and Operations Management 335.
3. Twelve semester hours chosen from the following courses: Management 325, 337 (any topic), 340S, Mechanical Engineering 366L, and Operations Management 337, 367, and 368.
4. Six semester hours of upper-division coursework in social science.
5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

The requirements of the consulting and change management track are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. The following courses: Management 328, 336, 374, and Operations Management 335.
3. Nine semester hours chosen from the following courses: Accounting 329, Management 325, 337 (any topic), 340S, Operations Management 337 (Topic 1: *Total Quality*)

Management). The following topics of Management 337 are recommended: *Groups and Teams*, Topic 9: *Leadership Issues*, Topic 22: *Women in Management*, Topic 21: *Art and Science of Negotiation*, Topic 20: *Entrepreneurial Management*, and *Strategic Change and Innovation*.

4. Six semester hours of upper-division coursework in social science.
5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## Management Information Systems

There is a great demand for individuals with knowledge about both business and computer applications. Through a series of business core courses and business computer courses, the program in management information systems is intended to prepare a professional who can fully appreciate the complexity of information system design. The graduate is expected to have both the technical and the managerial knowledge to solve fundamental business problems in inventory control, production, forecasting, finance, cost accounting, and other areas. Courses are designed to provide a foundation in the integration of hardware, software, networking, and business functional analysis for business systems.

The requirements of this program are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. The following courses: Management Information Systems 304, 325, 333K, 365, 374, and 375.
3. Three additional semester hours of upper-division coursework in management information systems.
4. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## Marketing

Marketers provide the link between businesses that have goods and services to sell and customers who want to purchase them. The marketing process involves a variety of activities, including research, strategic planning, product development, sales management, and marketing communications. Because the opportunities in the profession are diverse, the marketing degree program allows students to specialize in areas in which they have the strongest interest, while offering them a solid background in the concepts of marketing and business. A marketing degree can lead to a career in such areas as sales management, retail merchandising and management, marketing management, marketing research, and promotional strategy and management.

The requirements of this program are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. International Business 350, Marketing 460 (bears the quantitative reasoning flag), and 370 (bears the writing flag)

3. Nine semester hours chosen from Marketing 338, 340S, 363, 366P (may be used as an elective to satisfy the internship requirement, but not both), 370K, and 372.
4. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## Supply Chain Management

The supply chain management major is designed to prepare students to become leaders in supply chain management, a total systems approach taken by companies, suppliers, and partners to deliver manufactured products and services to the end customer. Information technology is used to integrate all elements of the supply chain from sourcing parts to coordination of retailers; this integration gives the enterprise a competitive advantage that is not available in traditional logistics systems. Entry-level positions in supply chain management include buyer, materials manager, risk management analyst, logistics planner, and staff consultant. Students work closely with the faculty adviser in the Department of Information, Risk, and Operations Management.

The requirements of this program are:

1. The Core Curriculum (p. 22) requirements and the BBA Degree Requirements (p. 52).
2. Management 336.
3. Operations Management 335, 337 (Topic 3: *Procurement and Supplier Management*), 367, and 368.
4. Six semester hours chosen from Operations Management 337 (Topic 1: *Total Quality Management*), 337 (Topic 2: *Supply Chain Modeling and Optimization*), 337 (Topic 4: *Supply Chain Design, Planning, and Control*), 337 (Topic 5: *Project Management*), 340S, and Management 337 (Topic 21: *The Art and Science of Negotiation*).
5. Additional elective coursework, if necessary, to provide a total of at least 120 semester hours.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

# Business Administration

## Business Administration: B A

### Lower-Division Courses

#### **B A 101H. Professional Development and Career Planning: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Professional development issues including self-assessment, identification of personal life goals, identification of business majors and exploration of potential career fields for each major, and analysis and discussion of the academic planning process and how it relates to professional development and career planning. One lecture hour a week for one semester. Only one of the following may be counted: Business Administration 101H, 101S, 101T. Offered on the letter-grade basis only.

#### **B A 101S. Career Planning: Freshman.**

Restricted to students in the McCombs School of Business. Discussion of issues surrounding career planning, implementation, and evaluation in order to establish career goals. Strategies for executing a successful job search, including interviewing techniques, resumes, networking, and job search ethics. Focus on career management as a lifelong process. One lecture hour a week for one semester. Only one of the following may be counted: Business Administration 101H, 101S, 101T. Offered on the letter-grade basis only.

#### **B A 101T. Career Planning Strategies.**

Restricted to students in the McCombs School of Business. Discussion of issues surrounding career planning, implementation, and evaluation. One lecture hour a week for one semester. Only one of the following may be counted: Business Administration 101, 101H, 101S, 101T, 102. Offered on the letter-grade basis only.

#### **B A 102F. Career Planning.**

Discussion of issues surrounding career planning, implementation, and evaluation in order to establish career goals. Studies strategies for executing a successful job search, including interviewing techniques, resumes, networking, and job search ethics. Focuses on career management as a lifelong process. One lecture hour a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Offered on the letter-grade basis only.

#### **B A 118C, 218C, 318C. Forum Seminar Series.**

Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### **B A 320F. Foundations of Entrepreneurship.**

Introduction to the mechanics and strategies for starting a business. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

#### **B A 321L. Contemporary Leadership Issues.**

Focuses on leadership topics such as ethics, diversity, and sustainability. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of the dean.

#### **B A 324. Business Communication: Oral and Written.**

Restricted to students in the McCombs School of Business. Theory and practice of effective communication, using models from business situations. Students practice what they learn with a variety of in-class activities, written assignments, and oral presentations. Teamwork and use of interpersonal skills are included. Three lecture hours a week for one semester. Business Administration 324 and 324H may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, 309K, or Tutorial Course 603A, and credit or registration for Business Administration 101H, 101S, or 101T.

#### **B A 324H. Business Communication: Oral and Written: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Theory and practice of effective communication, using models from business situations. Students practice what they learn with a variety of in-class activities, written assignments, and oral presentations. Teamwork and use of interpersonal skills are included. Three lecture hours a week for one semester. Business Administration 324 and 324H may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, 309K, or Tutorial Course 603A; and Business Administration 101H or 101S, or credit or registration for Business Administration 101T.

#### **B A 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Business Administration.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the director of the Business Foundations Program. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May not be counted toward the Bachelor of Business Administration degree. May be repeated for credit when the topics vary.

#### **B A 151H. Honors Lyceum in Business Administration.**

Restricted to students admitted to the McCombs School of Business Honors Program. Presentations by professionals from various fields of business. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Business Administration 101H or 101S, or credit or registration for Business Administration 101T.

#### **B A 352F. Internship in Business Administration.**

Focuses on students' career goals through academic discussion and evaluations, while students are working in professional internships with public and private enterprises. Internship to be arranged by the student and approved by the director of the Business Foundations Program. At least eight to ten internship hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Offered on the pass/fail basis only. Prerequisite: Completion of at least forty-five semester hours of coursework, Accounting 310F with a grade of at least C, and consent of the director of the Business Foundations Program.

#### **B A 353H. Internship in Business Administration--Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Focuses on students' career goals through academic

discussion and evaluations, while placing students in professional internships with public and private enterprises. Three lecture hours a week for one semester. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

#### **B A 366F. Business Administration Practicum.**

Students apply skills related to the Business Foundations certificate program curriculum and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing and completion of at least forty-five semester hours of coursework.

#### **B A 179F, 379F. Problems in Business Administration.**

Conference course. May not be counted toward the Bachelor of Business Administration degree. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Accounting 310F with a grade of at least C; a student registering for this course must have written approval from the director of the Business Foundations Program, on forms provided for that purpose, before the first meeting of the course.

## **Department of Accounting**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Accounting: ACC**

#### **Lower-Division Courses**

##### **ACC 310F. Foundations of Accounting.**

An introduction to financial and managerial accounting, with emphasis on the content, interpretation, and uses of accounting reports. Discussion of the determination and reporting of net income and financial position, and the theories underlying business financial statements; consideration of managerial accounting topics designed to extend the student's knowledge to the planning and controlling of the operations of the firm. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree.

##### **ACC 311 (TCCN: ACCT 2301). Fundamentals of Financial Accounting.**

Restricted to students in the McCombs School of Business. Concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements. Three lecture hours a week for one semester. Accounting 311 and 311H may not both be counted. Prerequisite: Twenty-four semester hours of college credit.

##### **ACC 311H. Fundamentals of Financial Accounting: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements. Three lecture hours a week for one semester. Accounting 311 and 311H may not both be counted. Prerequisite: Twenty-four semester hours of college credit; Management Information Systems 310 or a score of at least 79 on the Computer Proficiency Test; and credit or registration for Business Administration 324 or 324H.

##### **ACC 312 (TCCN: ACCT 2302). Fundamentals of Managerial Accounting.**

Restricted to students in the McCombs School of Business. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Three lecture hours a week for one semester. Accounting 312 and 312H may not both be counted. Prerequisite: Accounting 311 or 311H.

##### **ACC 312H. Fundamentals of Managerial Accounting: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Three lecture hours a week for one semester. Accounting 312 and 312H may not both be counted. Prerequisite: Accounting 311 or 311H, and credit or registration for Business Administration 151H.

### **Upper-Division Courses**

##### **ACC 326. Financial Accounting--Intermediate.**

Restricted to students in a business major. Theoretical foundation, concepts, and principles underlying financial statements; current assets; current liabilities; property, plant, and equipment; short-term investments; present value analysis. Three lecture hours a week for one semester. Accounting 326 and 380K (Topic 1: Financial Accounting Standards and Analysis I) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.

##### **ACC 327. Financial Statement Analysis.**

Restricted to students in a business major. Study of financial statements and their related footnotes; tools and procedures common to financial statement analysis; the relationships among business transactions, environmental forces (political, economic, and social), and reported financial information; and how financial statement information can help solve certain business problems. Three lecture hours a week for one semester. Prerequisite: Accounting 326 with a grade of at least C-.

##### **ACC 329. Managerial Accounting and Control.**

Restricted to students in a business major. The origination, processing, reporting, and use in business operations of accounting information for management purposes. Three lecture hours a week for one semester. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 359, 387 (Topic 1: Introduction to Managerial Accounting), 287 (Topic 5: Performance Management and Control). Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.



**ACC 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Accounting.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Accounting. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

**ACC 151. Accounting Careers Exploration.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Presentations by professional accountants and managers. One and one-half lecture hours a week for one semester. Offered on the letter-grade basis only.

**ACC 152. MPA Distinguished Speaker Lyceum.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Discussion of current issues confronting the accounting profession. The equivalent of two lecture hours a week for one semester. Offered on the pass/fail basis only.

**ACC 153. MPA Lyceum--Fifth Year.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Discussion of current issues confronting the accounting profession. The equivalent of two lecture hours a week for one semester. Offered on the pass/fail basis only.

**ACC 353J. Internship in Accounting.**

Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

**ACC 254. Accounting Careers Exploration.**

Presentations by professional accountants, managers, and career specialists. One and one-half lecture hours a week for two semesters. Offered on the letter-grade basis only. Prerequisite: For Accounting 254A, admission to the integrated approach to the Master in Professional Accounting; for 254B, Accounting 254A.

**ACC 355. Introduction to Taxation.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. The role of taxes in contemporary society and their impact on individuals and business. Three lecture hours a week for one semester. Only one of the following may be counted: Accounting 355, 364, 380K (Topic 11: Introduction to Taxation). Offered on the letter-grade basis only.

**ACC 356. Financial Accounting Concepts and Research.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Conceptual framework of financial accounting; research methods in financial reporting; and financial reporting institutions and regulations. Three lecture hours a week for one semester. Offered on the letter-grade basis only.

**ACC 457. Financial Accounting Standards and Analysis I.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Theoretical concepts, standards, and procedures underlying financial statements. Four lecture hours a week for one semester.

**ACC 358C. Introduction to Assurance Services.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Information quality assurance, auditing, and control, considered from the perspective of a business manager who must decide the type and amount of assurance to acquire. Three lecture hours a week for one semester. Only one of the following may be counted: Accounting 358C, 362, 380K (Topic 4: Introduction to Assurance Services). Offered on the letter-grade basis only. Prerequisite: Accounting 356 or the equivalent.

**ACC 458K. Financial Accounting Standards and Analysis II.**

Restricted to students admitted to the Professional Program in Accounting. Further study of the concepts, standards, and procedures underlying financial statements, including those of consolidated enterprises and foreign entities. Four lecture hours a week for one semester. Prerequisite: Accounting 457 with a grade of at least C-.

**ACC 359. Managerial/Cost Accounting.**

Restricted to students admitted to the integrated approach to the Master in Professional Accounting. Analysis of manufacturing costs, development of cost estimates, and preparation of relevant information for management decision making. Three lecture hours a week for one semester. Only one of the following may be counted: Business Administration 380E, 382T, Accounting 329, 359, 387 (Topic 1: Introduction to Managerial Accounting), 287 (Topic 5: Performance Management and Control). Offered on the letter-grade basis only.

**ACC 360. Financial Accounting--Advanced.**

Restricted to students in a business major. Accounting problems in respect to multiple ownership; consolidated financial statements and partnership accounts; foreign currency translation; segmental reporting; other special topics. Three lecture hours a week for one semester. Accounting 360 and 380K (Topic 2: Financial Accounting Standards and Analysis II) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Accounting 327 with a grade of at least C-.

**ACC 361. Governmental and Institutional Accounting.**

Restricted to students in a business major. Budgeting, accounting, auditing, and financial reporting principles and practices for government and other nonprofit entities. Three lecture hours a week for one semester. Accounting 361 and 380K (Topic 6: Issues in Accounting and Control for Nonprofit Organizations) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.

**ACC 362. Auditing and Control.**

Restricted to students in a business major. Professional practice standards and procedures of auditing: ethics, legal liability, sampling methods, control systems, control design, and control evaluation. Three lecture hours a week for one semester. Only one of the following may be counted: Accounting 358C, 362, 380K (Topic 4: Introduction to Auditing). Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each; and credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H,



Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P.

### **ACC 364. Fundamentals of Taxation.**

Restricted to students in a business major. Introduction to the role of taxes in contemporary society and their impact on individuals and business entities; emphasis on federal income taxation. Three lecture hours a week for one semester. Only one of the following may be counted: Accounting 355, 364, 380K (Topic 11: Introduction to Taxation). Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each.

### **ACC 365. Fundamentals of Financial and Administrative Information Systems.**

Restricted to students in a business major. Accounting information systems of organizations. Topics include selected hardware and software concepts, fundamentals of accounting information systems analysis, design, implementation, and control. Three lecture hours a week for one semester. Accounting 365 and 382K (Topic 1: Principles of Systems Analysis) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each; and Management Information Systems 301 or 310.

### **ACC 366P. Accounting Practicum.**

Restricted to business majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Accounting 366P and 384 (Topic: Tax Practicum) may not both be counted. Prerequisite: Forty-five semester hours of college coursework.

### **ACC 378. Contemporary Accounting Topics.**

Restricted to students in a business major. In-depth study of selected accounting topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each. Some topics have additional prerequisites; these are given in the Course Schedule.

**Topic 1: Hardware, Software, and Telecommunications.** Offered on the letter-grade basis only.

### **ACC 179C, 379C. Problems in Accounting.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Accounting 311 or 311H, and 312 or 312H, with a grade of at least C- in each; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Department of Finance**

### **Finance: FIN**

#### **Upper-Division Courses**

##### **FIN 320F. Foundations of Finance.**

Principles of effective financial management, including planning, organization, and control; financial intermediaries; securities markets; evaluating alternative assets, debt, and capital structures. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing; Accounting 310F, or 311 or 311H and 312 or 312H.

##### **FIN 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Finance.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Finance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

##### **FIN 353. Internship in Finance.**

Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

##### **FIN 354. Money, Banking, and Economic Conditions.**

Restricted to students in a business major. The monetary system, financial markets, national income components, and their relationship to business activity. Three lecture hours a week for one semester. Only one of the following may be counted: Economics 322, Finance 354, 354H. Prerequisite: Accounting 311 or 311H; Economics 304K and 304L; and credit or registration for Business Administration 324 or 324H.

##### **FIN 354H. Money, Banking, and Economic Conditions: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. The monetary system, financial markets, national income components, and their relationship to business activity. Three lecture hours a week for one semester. Only one of the following may be counted: Economics 322, Finance 354, 354H. Prerequisite: Forty-five semester hours of college coursework, Accounting 311 or 311H, credit or registration for Business Administration 324 or 324H, Economics 304K and 304L, and Mathematics 408K and 408L.

##### **FIN 357. Business Finance.**

Restricted to students in a business major. Principles of finance, with application to all aspects of the business firm; particular attention to cost of capital, investment decisions, management of assets, and procurement of funds. Three lecture hours a week for one semester. Finance 357 and 357H may not both be counted. Prerequisite:

Accounting 311 or 311H, Economics 304K and 304L, and Statistics 309 or 309H; and credit or registration for Accounting 312 or 312H and Business Administration 324 or 324H.

### **FIN 357H. Business Finance: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Principles of finance, with application to all aspects of the business firm; particular attention to cost of capital, investment decisions, management of assets, and procurement of funds. Three lecture hours a week for one semester. Finance 357 and 357H may not both be counted. Prerequisite: Forty-five semester hours of college coursework, Accounting 311 or 311H, Economics 304K, and Statistics 309 or 309H; and credit or registration for Accounting 312 or 312H, Business Administration 324 or 324H, and Economics 304L.

### **FIN 366P. Finance Practicum.**

Restricted to finance majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.

### **FIN 367. Investment Management.**

Restricted to students in a business major. Investment theory, alternatives, and decision making under differing uncertainties and constraints; formulation of objectives and strategies; development of conceptual managerial perspectives and philosophies for investment environments. Three lecture hours a week for one semester. Finance 367 and 367Q may not both be counted. Prerequisite: Finance 357 or 357H; and credit or registration for Statistics 371G, 371H, 375, or 375H.

### **FIN 367Q. Investment Management: Quantitative.**

Restricted to students in a business major. Quantitative approach to investments; decision making under differing uncertainties and constraints; portfolio theory and applications; formulation of investment strategies; introduction to option pricing; Monte Carlo simulation; and development of conceptual managerial perspectives and philosophies for investment environments. Three lecture hours a week for one semester. Finance 367 and 367Q may not both be counted. Prerequisite: Finance 357 or 357H, and credit or registration for Statistics 375 or 375H.

### **FIN 370. Integrative Finance.**

Restricted to students in a business major. Integrates financial decision making in functional areas of finance; utilizes various concepts to promulgate strategies, policies, and procedures in managing funds to achieve objectives. Three lecture hours a week for one semester. Prerequisite: Ninety semester hours of college coursework; Finance 357 or 357H, and 367 or 367Q; credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P; and three additional semester hours of coursework in finance or real estate.

### **FIN 371M. Money and Capital Markets.**

Restricted to students in a business major. Development of modern financial markets, with emphasis on the factors that determine interest rates; institutional characteristics and pricing mechanisms of various

interest-sensitive securities. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.

### **FIN 372. Advanced Topics in Finance.**

Restricted to students in a business major. Advanced topics in finance with emphasis on theoretical and quantitative analysis. Three lecture hours a week for one semester, or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Finance 357 or 357H.

### **FIN 373. Research Topics in Finance.**

Restricted to students in a business major. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Finance 357 or 357H, and consent of instructor.

**Topic 1: Advanced Studies in International Finance.** Students work in small research groups to write academic papers on topics in international finance and business. Designed to develop critical thinking skills, writing skills, sophisticated use of technology, and experience working across different cultures.

### **FIN 374C. Financial Planning and Policy for Large Corporations.**

Restricted to students in a business major. An in-depth study of theory and practice of corporate financial management in establishing major financial and investment policies; techniques for analysis, evaluation, and control. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.

### **FIN 374S. Entrepreneurial Finance.**

Restricted to students in a business major. Development, implementation, and control of financial plans, strategies, and policies by owner-managers of small and medium-sized firms; analysis of alternatives and decision making. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.

### **FIN 375F. Banking and Financial Intermediation.**

Restricted to students in a business major. Theory of financial intermediation, regulatory environment, interest rates, and asset/liability management with a focus on commercial banking; depository and contractual intermediation. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.

### **FIN 376. International Finance.**

Restricted to students in a business major. The international financial environment, with emphasis on the factors affecting exchange rates and how exchange rate changes affect the firm. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H.

### **FIN 377. Advanced Investment Analysis.**

Second course in investments, with emphasis on quantitative applications and the underlying theory in the analysis and management of securities and portfolios. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Portfolio Analysis and Management.** Restricted to students in a business major. Additional prerequisite: Finance 367 or 367Q.

**Topic 2: Financial Risk Management.** Restricted to students in a business major. Finance 377 (Topic 2) and 377 (Topic 5) may not both be counted. Additional prerequisite: Mathematics 408D or 408L, and credit or registration for Finance 367 or 367Q.

**Topic 3: Security Analysis.** For finance majors only. Finance 377 (Topic 3) and 377 (Topic 4) may not both be counted. Additional prerequisite: Credit or registration for Finance 367 or 367Q, and consent of instructor.

**Topic 4: Financial Analysis.** Restricted to students in a business major. Application of fundamental analysis and valuation techniques. Finance 377 (Topic 3) and 377 (Topic 4) may not both be counted. Additional prerequisite: Credit or registration for Finance 367 or 367Q.

**Topic 5: Energy Financial Risk Management.** Restricted to students in a business major. Finance 377 (Topic 2) and 377 (Topic 5) may not both be counted. Additional prerequisite: Finance 367 or 367Q.

### **FIN 377L. Portfolio Analysis and Management.**

Restricted to students in a business major. Quantitative applications and the underlying theory in the analysis and management of securities and portfolios; designed for students with career goals in investment. Three lecture hours a week for one semester. Prerequisite: Finance 367.

### **FIN 179C, 379C. Independent Research in Finance.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Finance 357 or 357H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Real Estate: R E**

### **Upper-Division Courses**

**R E 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Real Estate.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Finance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

### **R E 358. Introduction to Real Estate and Urban Land Development.**

Restricted to students in a business major. Principles of real estate and urban land economics, including an examination of investment, valuation, financing, and public policy in real estate and mortgage markets. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and credit or registration for Finance 357 or 357H.

### **R E 360. Special Topics in Real Estate.**

Restricted to students in a business major. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Real Estate 358.

### **R E 376G. Real Estate Investment.**

Restricted to students in a business major. Study of the setting and measurement of property values in real estate markets and an analysis of real estate assets as investments. Three lecture hours a week for one semester. Prerequisite: Real Estate 358.

### **R E 378K. Real Estate Finance and Syndication.**

Restricted to students in a business major. Debt and equity financing of residential and commercial properties; mortgage markets and instruments; lender and investor decisions in real estate financing. Three lecture hours a week for one semester. Prerequisite: Real Estate 358.

### **R E 179C, 379C. Independent Research in Real Estate.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Real Estate 358 with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Department of Business, Government and Society**

### **Business, Government, and Society: BGS**

#### **Lower-Division Courses**

#### **BGS 301H. Microeconomics: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Examines theories of consumer and business behavior in the market economy. Includes the study of demand and supply, optimal consumption choice with respect to budget constraints, producer costs and output decisions, demand for labor and other inputs, and economic outcomes under product demand structures ranging from perfect competition to pure monopoly. Three lecture hours a week for one semester.

#### **BGS 302H. Macroeconomics: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Introduction to macroeconomics. Studies the behavior of the aggregate economy; includes gross domestic product, consumption, savings, investment, unemployment, inflation, the role of the monetary system, the role of taxes, government spending and fiscal policy, the national debt, and international trade. Three lecture hours a week for one semester. Prerequisite: Business, Government, and Society 301H or Economics 304K with a grade of at least C-.

## Upper-Division Courses

### BGS 321H. Economics of Strategic Behavior.

Restricted to students admitted to the McCombs School of Business Honors Program. Designed to develop a student's ability to apply game theory and related concepts to business decision making. Examines the application of game theory to pricing and product strategy, capacity choices, contracting and negotiating, takeover strategy, organizational structure, trade policies, and litigation and regulation strategy. Three lecture hours a week for one semester. Prerequisite: Business, Government, and Society 302H or Economics 304L with a grade of at least C-.

### BGS 322H. Strategic Management of the Nonmarket Environment: Honors.

Restricted to students admitted to the McCombs School of Business Honors Program. Studies the regulations and norms governing a firm's market behavior and examines a set of frameworks and tools that assist managers in non-market analysis and strategy development. Three lecture hours a week for one semester. Prerequisite: Business, Government, and Society 302H or Economics 304L with a grade of at least C-.

### BGS 325. Social and Ethical Responsibility of Business.

Restricted to students in a business major. Examines ethical aspects of the decision-making processes of managers and employees. Also explores responsibility of firms to society and other constituencies. Three lecture hours a week for one semester.

### BGS 370. Topics in Business, Government, and Society.

Restricted to students in a business major. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Energy Technology and Policy.** Designed to give students an understanding of the broad context of energy production and consumption in the U.S. and the world. Discusses past energy trends and fundamentals of energy and power, including fossil fuels and renewable energy sources and technologies. Explores different energy resources, environmental impacts, and societal uses of energy, and concludes with an evaluation of future energy technology options.

## Legal Environment of Business: LEB

### Upper-Division Courses

#### LEB 320F. Foundations of the Legal Environment of Business.

Not open to law students. Introduction to the legal problems confronting businesses in the global environment. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

#### LEB 323. Business Law and Ethics.

Restricted to students in a business major. Role of law in society; introduction to legal reasoning, dispute resolution, judicial process, constitutional law, agency, torts, government regulations; business ethics; study of contracts. Three lecture hours a week for one semester. Legal Environment of Business 323 and 323H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H.

#### LEB 323H. Business Law and Ethics: Honors.

Restricted to students admitted to the McCombs School of Business Honors Program. Role of law in society; introduction to legal reasoning, dispute resolution, judicial process, constitutional law, agency, torts, government regulations; business ethics; study of contracts. Three lecture hours a week for one semester. Legal Environment of Business 323 and 323H may not both be counted. Prerequisite: Ninety semester hours of college coursework, Accounting 312 or 312H, and credit or registration for Business Administration 324 or 324H.

#### LEB 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in the Legal Environment of Business.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or by the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### LEB 361. Law of Business Organizations.

Restricted to students in a business major. Study of basic legal principles of business organizations and operations, including practical comparison and assessment of advantages and disadvantages of different types of organization. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H.

#### LEB 363. Real Estate Law.

Restricted to students in a business major. Law pertaining to estates and interests in land, conveyances and mortgages, brokers, easements, contracts, default and foreclosure. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H, or consent of instructor.

#### LEB 366. Commercial Transactions.

Restricted to students in a business major. Applied business transactions, with emphasis on the Uniform Commercial Code; emphasis on bailments, sales of goods, commercial paper, bank-customer relationships, creditor security devices, and bankruptcy. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H.

#### LEB 370. Topics in the Legal Environment of Business.

Restricted to students in a business major. Selected topics on legal constraints affecting managerial decision making and business behavior. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Legal Environment of Business 323 or 323H with a grade of at least C-.

**Topic 1: Antitrust Law.**

**Topic 2: Environmental Law.**

**Topic 3: Employer-Employee Relations.**

**Topic 4: Social and Ethical Responsibilities of Business.**

**Topic 5: The Law and the Multinational Corporation.**

**Topic 6: Law of the Entertainment Business.**

**Topic 7: Business Torts.**

**Topic 8: Constitutional Issues in Business.**

**Topic 9: Business Dispute Resolution.**

**Topic 10: Intellectual Property.**

**Topic 11: Sports, Sports Management, and Entertainment Law.**

Survey of the law as it relates to amateur and professional sports



and sports management. Includes an entertainment law component that examines the legal aspects of the film industry.

**Topic 12: Law of the European Union.** Introduction to the rapidly evolving law of the European Union, with particular emphasis on business applications and comparisons to American law.

### **LEB 179, 379. Problems in the Legal Environment of Business.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Legal Environment of Business 323 or 323H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Department of Information, Risk, and Operations Management**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Legal Environment of Business: LEB Upper-Division Courses**

#### **LEB 320F. Foundations of the Legal Environment of Business.**

Not open to law students. Introduction to the legal problems confronting businesses in the global environment. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

#### **LEB 323. Business Law and Ethics.**

Restricted to students in a business major. Role of law in society; introduction to legal reasoning, dispute resolution, judicial process, constitutional law, agency, torts, government regulations; business ethics; study of contracts. Three lecture hours a week for one semester. Legal Environment of Business 323 and 323H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H.

#### **LEB 323H. Business Law and Ethics: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Role of law in society; introduction to legal reasoning, dispute resolution, judicial process, constitutional law, agency, torts, government regulations; business ethics; study of contracts. Three lecture hours a week for one semester. Legal Environment of Business 323 and 323H may not both be counted. Prerequisite: Ninety semester hours of college coursework, Accounting 312 or 312H, and credit or registration for Business Administration 324 or 324H.

#### **LEB 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in the Legal Environment of Business.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or by the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### **LEB 361. Law of Business Organizations.**

Restricted to students in a business major. Study of basic legal principles of business organizations and operations, including practical comparison and assessment of advantages and disadvantages of different types of organization. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H.

#### **LEB 363. Real Estate Law.**

Restricted to students in a business major. Law pertaining to estates and interests in land, conveyances and mortgages, brokers, easements, contracts, default and foreclosure. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H, or consent of instructor.

#### **LEB 366. Commercial Transactions.**

Restricted to students in a business major. Applied business transactions, with emphasis on the Uniform Commercial Code; emphasis on bailments, sales of goods, commercial paper, bank-customer relationships, creditor security devices, and bankruptcy. Three lecture hours a week for one semester. Prerequisite: Legal Environment of Business 323 or 323H.

#### **LEB 370. Topics in the Legal Environment of Business.**

Restricted to students in a business major. Selected topics on legal constraints affecting managerial decision making and business behavior. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Legal Environment of Business 323 or 323H with a grade of at least C-.

**Topic 1: Antitrust Law.**

**Topic 2: Environmental Law.**

**Topic 3: Employer-Employee Relations.**

**Topic 4: Social and Ethical Responsibilities of Business.**

**Topic 5: The Law and the Multinational Corporation.**

**Topic 6: Law of the Entertainment Business.**

**Topic 7: Business Torts.**

**Topic 8: Constitutional Issues in Business.**

**Topic 9: Business Dispute Resolution.**

**Topic 10: Intellectual Property.**

**Topic 11: Sports, Sports Management, and Entertainment Law.**

Survey of the law as it relates to amateur and professional sports and sports management. Includes an entertainment law component that examines the legal aspects of the film industry.

**Topic 12: Law of the European Union.** Introduction to the rapidly evolving law of the European Union, with particular emphasis on business applications and comparisons to American law.

#### **LEB 179, 379. Problems in the Legal Environment of Business.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C,



International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Legal Environment of Business 323 or 323H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## Management Information Systems: MIS

### Lower-Division Courses

#### **MIS 301. Introduction to Information Technology Management.**

Restricted to students in the McCombs School of Business. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 301H may not both be counted.

#### **MIS 301H. Introduction to Information Technology Management: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. Management Information Systems 301 and 301H may not both be counted.

#### **MIS 302F. Introduction to Information Technology Management.**

Open only to nonbusiness majors. Explores how information technology helps to achieve competitive advantage and improve decision making, business processes, operations, and organizational design. Uses a cross-functional perspective to recognize the role of technology across business activities of management, finance, marketing, human resources, and operations. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Management Information Systems 302F and 311F may not both be counted.

#### **MIS 304. Introduction to Problem Solving and Programming.**

Restricted to students in the McCombs School of Business. Programming skills for creating easy-to-maintain systems for business applications. Object-oriented and structured methodologies with Visual Basic. Three lecture hours a week for one semester. Offered on the letter-grade basis only.

#### **MIS 310 (TCCN: BCIS 1305). Introduction to Management Information Systems.**

Basic computer terminology, hardware and software, communications technology, graphics, systems analysis and design, and issues arising out of the rapidly evolving field of information systems. Students

are expected to achieve a working knowledge of personal computer software, including operating system software and environments, as well as spreadsheets, analytical graphics, databases, and presentation software. Hands-on experience with the Internet and use of electronic mail. Three lecture hours a week for one semester.

### Upper-Division Courses

#### **MIS 325. Database Management.**

Restricted to students in the McCombs School of Business. Beginning and intermediate topics in data modeling for relational database management systems. Three lecture hours a week for one semester. Offered on the letter-grade basis only.

#### **MIS 333K. Web Application Development.**

Restricted to students in a business major. Concepts and practices of information systems. Advanced programming techniques used to generate menu-driven applications. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 304 and 325.

#### **MIS 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Management Information Systems.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### **MIS 353. Internship in Management Information Systems.**

Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not count toward the student's major requirement. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

#### **MIS 365. Business Data Communications and Networking.**

Restricted to students in a business major. Introduces the foundations of data communications and information security in a networked economy. Provides tools for analyzing strategic, economic, organizational, and social implications of emerging data communications technologies. Explores the use of data communications technologies to increase returns and decrease risks of organizations. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

#### **MIS 366P. Management Information Systems Practicum.**

Restricted to students in a business major. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.

### **MIS 373. Topics in Management Information Systems.**

Restricted to students in a business major. Provides in-depth treatment of business data processing concerns such as database management, telecommunications, and development of commercial systems. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Varies with the topic.

#### **Topic 6: Advanced Application of Software Development.**

Offered on the letter-grade basis only. Prerequisite: Management Information Systems 333K and consent of instructor.

**Topic 8: Advanced Data Communication Systems.** Development issues for intranet- and internet-based systems. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 365.

**Topic 9: Health Care Management.** Offered on the letter-grade basis only. Prerequisite: Management Information Systems 325.

**Topic 12: Technical Consulting.** Offered on the letter-grade basis only. Prerequisite: Management Information Systems 304 and consent of instructor.

**Topic 13: Information Technology for Supply Chains.** Provides an understanding of how information technology is used to coordinate supply chain activities across different industries. Students work in teams and undertake hands-on exercises to learn how to plan and coordinate operations. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 301 with a grade of at least C-.

**Topic 14: Web Systems Development.** Concepts underlying Web development tools, page and site design, and building Web-based business sites. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 304 and 325.

**Topic 15: Systems Analysis for E-Business.** Applications of technology for creating e-business systems and process redesign. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 325.

**Topic 16: Information Technology Security, Privacy, and Survivability.** Offered on the letter-grade basis only. Prerequisite: For business majors, Management Information Systems 333K or the equivalent; for others, consent of instructor.

**Topic 17: Data Mining for Business Intelligence.** Introduces the data mining process and primary data mining techniques employed to extract intelligence from data and evaluates the strengths and weaknesses of data mining techniques applied to challenges in various business domains. Offered on the letter-grade basis only. Prerequisite: Statistics 309 or 309H.

**Topic 18: Business Process Excellence.** Provides in-depth coverage of business process change and management with information technology (IT) in today's organizations. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

**Topic 19: Enterprise Computing.** Offered on the letter-grade basis only. Prerequisite: Management Information Systems 333K.

**Topic 20: Managing the Future.** Addresses the management of uncertainty. Introduces managerial concepts and methods for structuring decisions about the uncertainties in the future of industries, products, markets, and technologies. Includes scenario analysis, technology roadmaps, and dynamic innovation models. Students work in teams and undertake hands-on exercises aimed at developing a set of alternative futures for industries and technologies. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **MIS 374. Business System Development.**

Restricted to students in a business major. Provides foundation in business system analysis, project management, planning, design, and

implementation, using basic business knowledge and computer skills. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Management Information Systems 333K and credit or registration for Management Information Systems 365.

### **MIS 375. Strategic Information Technology Management.**

Restricted to students with a major in business. Designed to develop an understanding and appreciation for the role of information technology in the context of a firm's strategy. Explores the impact of information technology on the economy and business performance, the emergence of electronic business applications and organizational and market transformation, and the nature of technology-driven business models and strategies. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **MIS 179, 379. Independent Research in Management Information Systems.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Management Information Systems 304 and 325 with a grade of at least B- in each, and consent of instructor. A student registering for this course must have written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Operations Management: O M Upper-Division Courses**

### **O M 335. Operations Management.**

Restricted to students in a business major. The operations or production function and the skills required for analyzing and solving related problems. Three lecture hours a week for one semester. Operations Management 335 and 335H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H and credit or registration for Statistics 309 or 309H.

### **O M 335H. Operations Management: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. The operations or production function and the skills required for analyzing and solving related problems. Three lecture hours a week for one semester. Operations Management 335 and 335H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H, and credit or registration for Statistics 309 or 309H.

### **O M 337. Special Topics in Operations Management.**

Restricted to students in a business major. Analysis of contemporary management problems. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Management 337 and Operations Management 337 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Total Quality Management.** Three lecture hours a week for one semester. Prerequisite: For business majors, Operations

Management 335 or 335H with a grade of at least C-; for others, admission to an appropriate major sequence in engineering.

**Topic 2: Supply Chain Modeling and Optimization.** Formulating models of decision-making situations, the appropriate use of quantitative techniques, and finding solutions to the models that optimize objective measures of merit using readily available computer software. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Operations Management 335 or 335H.

**Topic 3: Procurement and Supplier Management.** Strategic issues in procurement and supplier management; review of competitive analysis and benchmarking; the purchasing role in fulfilling a firm's operational and competitive strategies; supplier evaluation, development, and relationship management; negotiating with suppliers for results; and commodity planning. Three lecture hours a week for one semester. Prerequisite: Operations Management 335 or 335H with a grade of at least C-.

**Topic 4: Supply Chain Design, Planning, and Control.** The different planning systems used in an integrated supply chain, such as manufacturing resource planning, distribution resource planning, and sales and operations planning. Includes the latest trends in supply chain management, such as demand management and sustainable supply chains, and the information technology systems used to support an integrated business framework. Three lecture hours a week for one semester. Prerequisite: Operations Management 335 or 335H with a grade of at least C-.

**Topic 5: Project Management.** Prerequisite: Operations Management 335 or 335H with a grade of at least C-.

#### **O M 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Operations Management.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### **O M 353. Internship in Operations Management.**

Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

#### **O M 366P. Operations Management Practicum.**

Restricted to students in a business major. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Management 366P and Operations Management 366P may not both be counted. Prerequisite: Completion of at least forty-five semester hours of college coursework, and credit or registration for Operations Management 335 or 335H.

#### **O M 367. Strategic Supply Chain Management.**

Restricted to students in a business major. Management of manufacturing process technology in international competition. Three lecture hours a week for one semester. Prerequisite: Operations Management 335 or 335H.

#### **O M 368. Logistics and Inventory Management.**

Restricted to students in a business major. Analysis of the entire flow of information, materials, and services from suppliers through factories and warehouses to the end customer. Includes logistics, supplier selection, and inventory management, using case studies, optimization, and simulation. Three lecture hours a week for one semester. Prerequisite: Operations Management 335 or 335H.

#### **O M 179, 379. Independent Research in Operations Management.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-; and consent of instructor. A student registering for this course must have written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

### **Risk Management: R M**

#### **Upper-Division Courses**

#### **R M 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Risk Management.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### **R M 357E. Introduction to Risk Management.**

Principles of risk management for individuals and organizations, financial aspects of insurance companies and markets, industry structure, managerial aspects of underwriting and pricing, and public policy issues. Three lecture hours a week for one semester.

#### **R M 369K. Managing Employee Risks and Benefits.**

Risk management issues involving financial consequences of life and health contingencies, health care finance, company management, pension planning, economics of industry structure, and public policy issues. Three lecture hours a week for one semester.

#### **R M 377. Property-Liability Risk Management and Planning.**

Analysis of property-liability risks of businesses, risk management tools, risk financing, and insurance contracts for financial planning purposes; investment and underwriting operations, market structures,



and insurance regulation. Three lecture hours a week for one semester.

### **R M 179, 379. Independent Research in Risk Management.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Statistics: STA**

### **Lower-Division Courses**

#### **STA 309. Elementary Business Statistics.**

Restricted to students in the McCombs School of Business. Training in the use of data to gain insight into business problems; describing distributions (center, spread, change, and relationships), producing data (experiments and sampling), probability and inference (means, proportions, differences, regression and correlation). Three lecture hours a week for one semester. Only one of the following may be counted: Economics 329, Statistics 309, 309H. Prerequisite: Mathematics 408C or 408K and Mathematics 408D or 408L.

#### **STA 309H. Elementary Business Statistics: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Training in the use of data to gain insight into business problems; describing distributions (center, spread, change, and relationships), producing data (experiments and sampling), probability and inference (means, proportions, differences, regression and correlation). Three lecture hours a week for one semester. Only one of the following may be counted: Economics 329, Statistics 309, 309H. Prerequisite: Mathematics 408C or 408K, and Mathematics 408D or 408L.

### **Upper-Division Courses**

#### **STA 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Statistics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Information, Risk, and Operations Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### **STA 371G. Statistics and Modeling.**

Restricted to students admitted to the McCombs School of Business. Focuses on methods used to model and analyze data. Explores multiple regression models and their application in the functional areas of business, time-series models, decision analysis and the value of information, and simulation-based methods. Three lecture hours a week for one semester. Only one of the following may be counted: Statistics 371G, 371H, 375, 375H. Prerequisite: Management

Information Systems 301, 301H, or 310; Mathematics 408D, 408L, or 408M; Statistics 309 or 309H; and credit or registration for Business Administration 324 or 324H.

#### **STA 371H. Statistics and Modeling: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Focuses on methods used to model and analyze data. Explores multiple regression models and their application in the functional areas of business, time-series models, decision analysis and the value of information, and simulation-based methods. Three lecture hours a week for one semester. Only one of the following may be counted: Statistics 371G, 371H, 375, 375H. Prerequisite: Management Information Systems 301, 301H, or 310; Mathematics 408D, 408L, or 408M; Statistics 309 or 309H; and credit or registration for Business Administration 324 or 324H.

#### **STA 372. Topics in Statistics.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Statistics 309 with a grade of at least C-.

##### **Topic 1: Statistical Computer Packages.**

##### **Topic 2: Sampling.**

##### **Topic 3: Statistical Decision Making for Business.**

##### **Topic 4: Multivariate Statistical Analysis.**

##### **Topic 5: Financial and Econometric Time Series Modeling.**

Applied skills course that focuses on statistical forecasting methods used in business. Subjects may include Box-Jenkins models; exponential smoothing models; ARCH/GARCH models for varying volatility in financial returns; seasonal adjustment of time series; tests for nonstationarity of time series; and modeling multiple time series. Each subject is illustrated with real data using series such as interest rates and stock returns. Additional prerequisite: Statistics 371G, 371H, 375, or 375H.

**Topic 6: Optimization Methods in Finance.** Focuses on deterministic and stochastic optimization methods used to analyze problems in finance, including linear, nonlinear, quadratic, and integer programming, and dynamic and stochastic programming. Additional prerequisite: Mathematics 408D, 408L, or 408M.

**Topic 7: Computational Finance.** A systematic introduction to the analysis and implementation of numerical methods used in finance. Covers numerical techniques used in derivative pricing and optimal asset allocation, such as Monte Carlo and quasi-Monte Carlo simulation, methods for solving partial differential equations, and dynamic programming. Additional prerequisite: Mathematics 408D, 408L, or 408M.

#### **STA 375. Statistics and Modeling for Quantitative Finance.**

Restricted to students admitted to the McCombs School of Business. Methods used to model and analyze data, especially as applied to problems related to finance. Explores regression models, time-series models, and simulation-based methods. Three lecture hours a week for one semester. Only one of the following may be counted: Statistics 371G, 371H, 375, 375H. Prerequisite: Management Information Systems 301, 301H, or 310; Mathematics 408D, 408L, or 408M; Statistics 309 or 309H; and credit or registration for Business Administration 324 or 324H.

#### **STA 375H. Statistics and Modeling for Quantitative Finance: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Methods used to model and analyze data, especially as applied to problems related to finance. Explores regression models, time-series models, and simulation-based methods. Three lecture

hours a week for one semester. Only one of the following may be counted: Statistics 371G, 371H, 375, 375H. Prerequisite: Management Information Systems 301, 301H, or 310; Mathematics 408D, 408L, or 408M; Statistics 309 or 309H; and credit or registration for Business Administration 324 or 324H.

#### **STA 376. Intermediate Statistics.**

Restricted to students in a business major. Analysis of forecasting techniques and theory; macroeconomic models; long-range and short-term forecasting; forecasting for the firm, using case material. Three lecture hours a week for one semester. Prerequisite: Statistics 309 or 309H.

## **Department of Management**

### **Management: MAN**

#### **Upper-Division Courses**

##### **MAN 320F. Foundations of Organizational Behavior and Administration.**

An introduction to the management of organizations. Issues are addressed from the perspectives of strategy and planning, organizational behavior, and operations management. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

##### **MAN 325. Strategic Human Resources Management.**

Restricted to students in a business major. Overview of the personnel function, covering recruitment, compensation, equal employment, job analysis, training, benefits, employee discipline, collective bargaining, safety, and health. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Management 336 or 336H.

##### **MAN 328. Consulting and Change Management.**

Restricted to students in a business major. Designed to develop the fundamental change knowledge and consulting skills of students who plan to work with organizations as change agents, whether internally as managerial employees or externally as outside consultants. Three lecture hours a week for one semester. Prerequisite: Management 336 or 336H with a grade of at least C-.

##### **MAN 336. Organizational Behavior.**

Restricted to students in a business major. The process of managing organizations and the behavior of individuals and groups within the organizational setting. Three lecture hours a week for one semester. Management 336 and 336H may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H; and credit or registration for three semester hours of coursework in anthropology, psychology, or sociology.

##### **MAN 336H. Organizational Behavior: Honors.**

Restricted to students admitted to the McCombs School of Business Program. The process of managing organizations and the behavior of individuals and groups within the organizational setting. Three lecture hours a week for one semester. Management 336 and 336H may not both be counted. Prerequisite: Accounting 312H; credit or registration for Business Administration 324 or 324H; and thirty semester hours of college coursework, including credit or registration for three semester hours of coursework in anthropology, psychology, or sociology.

##### **MAN 337. Special Topics in Management.**

Analysis of contemporary management problems. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Some sections are offered on the letter-grade basis only; these are identified in the Course Schedule. Management 337 and Operations Management 337 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 9: Leadership Issues.** Restricted to students in a business major. Three lecture hours a week for one semester. Prerequisite: Management 336 or 336H with a grade of at least C-.

**Topic 11: Management of Cultural Differences.** Restricted to students in a business major. Three lecture hours a week for one semester. Prerequisite: Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-.

**Topic 15: Government in the Business Environment.** Three lecture hours a week for one semester. Prerequisite: Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-.

**Topic 16: Sociology of Entrepreneurship.** Same as African and African Diaspora Studies 358C and Sociology 358C. Examines the creation of entrepreneurial activities in the United States, including those of all racial and ethnic groups. Three lecture hours a week for one semester. Prerequisite: For management majors, one of the following courses with a grade of at least C-, or two of the following courses with a grade of at least C- in each: Management 336, 336H, Operations Management 335 Operations Management 335H; for others, sixty semester hours of college coursework.

**Topic 20: Entrepreneurial Management.** Restricted to students in a business major. Covers the life cycle of an entrepreneurial business, including evaluating the attractiveness of an idea, launching the business, growing the business, and harvesting the profits. Three lecture hours a week for one semester. Prerequisite: Accounting 311; Management 336, 336H, Operations Management 335, or 335H with a grade of at least C-; and credit or registration for Finance 357 or 357H.

**Topic 21: The Art and Science of Negotiation.** Restricted to students in a business major. Designed to help students develop a broad array of negotiation skills and to understand negotiations in useful analytical frameworks. Emphasis is placed on simulations, role-playing, and cases. Three lecture hours a week for one semester. Prerequisite: Management 336 or 336H with a grade of at least C-.

**Topic 22: Women in Management.**

##### **MAN 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Management.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Management. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

##### **MAN 353. Internship in Management.**

Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems



353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

#### **MAN 366P. Management Practicum.**

Restricted to business majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Management 366P and Operations Management 366P may not both be counted. Prerequisite: Forty-five semester hours of college coursework and consent of instructor.

#### **MAN 374. General Management and Strategy.**

Restricted to students in a business major. Designed to enable students to analyze business situations from the point of view of the practicing general manager. Addresses key tasks involved in general management, including strategic decisions that insure the long-term health of the entire firm or a major division. Three lecture hours a week for one semester. Management 374 and 374H may not both be counted. Prerequisite: Seventy-five semester hours of college coursework, including one of the following: Management 336, 336H, Operations Management 335, 335H; credit or registration for Finance 357 or 357H, and Marketing 337 or 337H; and credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P.

#### **MAN 374H. General Management and Strategy: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Designed to enable students to analyze business situations from the point of view of the practicing general manager. Addresses key tasks involved in general management, including strategic decisions that insure the long-term health of the entire firm or a major division. Three lecture hours a week for one semester. Management 374 and 374H may not both be counted. Prerequisite: Ninety semester hours of college coursework; Finance 357 or 357H; Management 336, 336H, Operations Management 335, or 335H; Marketing 337 or 337H; and credit or registration for one of the following: Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P.

#### **MAN 179C, 379C. Independent Research in Management.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; and Management 336 with a grade of at least C-.

## **Department of Marketing**

### **International Business: I B**

#### **Upper-Division Courses**

##### **I B 320F. Foundations of International Business.**

Fundamentals of international trade and the international economy; international dimensions of several functional areas of business, including management, marketing, finance, and human resource management; theoretical, institutional, and functional foundations of international business. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

##### **I B 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in International Business.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Marketing. University credit is awarded for work in an exchange program; it may be counted a coursework taken in residence. May be repeated for credit when the topics vary.

##### **I B 350. International Trade.**

Restricted to students in a business major. Study of the principles, policies, and problems of the international exchange of goods and investments. Three lecture hours a week for one semester. Economics 339K and International Business 350 may not both be counted. Prerequisite: Credit or registration for Business Administration 324 or 324H.

##### **I B 372. Seminar in International Business.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic and are given in the Course Schedule.

##### **Topic 1: International Marketing.**

**Topic 2: Business in Emerging Markets.** Same as Latin American Studies 322 (Topic 9: Business in Emerging Markets) and Middle Eastern Studies 341 (Topic 2: Business in Emerging Markets). Only one of the following may be counted: International Business 372 (Topic 2), Latin American Studies 322 (Topic 9), Middle Eastern Studies 322K (Topic 4: Business in Emerging Markets), 341 (Topic 2).

##### **Topic 3: Managing the Global Corporation.**

##### **Topic 4: Competing with the Japanese.**

##### **Topic 5: Business in Latin America.**

**Topic 6: Business German.** German 356W and International Business 372 (Topic 6) may not both be counted. Additional prerequisite: German 312K or 312V with a grade of at least C-, or appropriate score on the placement test.

**Topic 7: Advanced Business German.** Designed for students who have taken German 328. Taught in German. Normally meets with German 336W. German 336W and International Business 372 (Topic 7) may not both be counted. May be counted toward the international business elective requirement. Additional prerequisite: Three courses beyond German 506, or equivalent credit on the placement test.

**Topic 8: Business Spanish.** International Business 372 (Topic 8) and Mexican American Studies 350 may not both be counted. Additional prerequisite: Spanish 327G.

**Topic 9: Business French.** Taught in French. Additional prerequisite: French 320E and one additional upper-division French course, or consent of instructor.

### **I B 378. International Business Operations.**

Restricted to students in a business major. Establishment and conduct of international business operations: trade, investments, branch and subsidiary management, intermediary functions; case studies in international enterprise. Three lecture hours a week for one semester. Prerequisite: Economics 339K or International Business 350, and credit or registration for one of the following: Accounting 353J, 366P, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P.

### **I B 179C, 379C. Independent Research in International Business.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; International Business 350 with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

## **Marketing: MKT**

### **Upper-Division Courses**

#### **MKT 320F. Foundations of Marketing.**

Introduction to basic concepts and terminology in marketing: the process of developing marketing strategy, the role of marketing activities within the firm, external influences that affect the development of marketing strategy, and basic analytical tools appropriate to marketing decision making. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Business Administration degree. Prerequisite: Upper-division standing.

#### **MKT 337. Principles of Marketing.**

Restricted to students in a business major. Designed to expand the student's understanding of the marketing system and basic marketing activities and to provide a framework for marketing strategy development and implementation of marketing tools and tactics. Three lecture hours a week for one semester. Marketing 337 and 337H may not both be counted. Prerequisite: Credit or registration for Accounting 312 or 312H, Business Administration 324 or 324H, and Statistics 309 or 309H.

#### **MKT 337H. Principles of Marketing: Honors.**

Restricted to students admitted to the McCombs School of Business Honors Program. Designed to expand the student's understanding of the marketing system and basic marketing activities and to provide a framework for marketing strategy development and implementation of marketing tools and tactics. Three lecture hours a week for one semester. Marketing 337 and 337H may not both be counted.

Prerequisite: Accounting 312H and credit or registration for Business Administration 324H.

#### **MKT 338. Promotional Policies.**

Restricted to students in a business major. Analysis of the use of promotional methods in marketing: advertising, personal selling, sales promotion, and indirect promotion; their social and economic consequences; their coordination and relationship to other business functions. Three lecture hours a week for one semester. Prerequisite: Marketing 337 or 337H.

#### **MKT 140S, 240S, 340S, 440S, 540S, 640S, 740S, 840S, 940S. Topics in Marketing.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office or the school's BBA Exchange Programs. Credit is recorded as assigned by the study abroad adviser in the Department of Marketing. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. May be repeated for credit when the topics vary.

#### **MKT 353. Internship in Marketing and International Business.**

Restricted to students in a business major. Focuses on students' career goals through academic discussion and evaluations, while placing students in professional internships with public and private enterprises. Internship and discussion hours to be arranged. Only one of the following may be counted toward the Bachelor of Business Administration: Accounting 353J, Business Administration 353H, Finance 353, Management 353, Management Information Systems 353, Marketing 353, Operations Management 353. May not be counted toward the student's major requirement. Offered on the pass/fail basis only. Prerequisite: Completion of forty-five semester hours of college coursework and consent of the departmental internship coordinator.

#### **MKT 460. Information and Analysis.**

Restricted to students in a business major. The development and analysis of information for marketing management sources. Three lecture hours and one recitation hour a week for one semester. Prerequisite: Marketing 337 or 337H, and Statistics 309 or 309H.

#### **MKT 363. Professional Selling and Sales Management.**

Restricted to students in a business major. Policies, operation, coordination, and control of personal selling activities in marketing organizations. Three lecture hours a week for one semester. Prerequisite: Marketing 337 or 337H.

#### **MKT 366P. Special Projects in Marketing Practicum.**

Restricted to business majors. Students apply skills in their major area and focus on additional project management skills through group projects conducted in a professional setting. Students may work with a private or a public enterprise. The equivalent of three lecture hours a week for one semester. Prerequisite: Completion of forty-five semester hours of college coursework, and Marketing 337 or 337H.

#### **MKT 370. Marketing Policies.**

Restricted to students in a business major. A capstone course focusing on case studies of advanced marketing problems, including analysis of markets, promotional planning, pricing, and distribution coordination. Designed to help the student develop a comprehensive understanding of marketing policy and strategy formulation. Three lecture hours a week for one semester. Prerequisite: Finance 357 or 357H, and Marketing 460; credit or registration for one of the following:

Accounting 353J, 366P, Business Administration 353H, Finance 353, 366P, Management 353, 366P, Management Information Systems 353, 366P, Marketing 353, 366P, Operations Management 353, 366P; and six additional semester hours of coursework in marketing.

**MKT 370K. Retail Merchandising.**

Restricted to students in a business major. Designed to familiarize the student with all the activities associated with the sale of goods and services for final consumption and to provide an overview of the decisions involved in merchandising and management, including factors that influence and determine those decisions. Three lecture hours a week for one semester. Prerequisite: Marketing 337 or 337H.

**MKT 372. Marketing Seminar.**

Restricted to students in a business major. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Marketing 337 or 337H. Additional prerequisites may be required for some topics; these are given in the Course Schedule.

**Topic 1: Market Area Decisions.**

**Topic 2: Consumer Behavior.**

**Topic 3: Implementing Marketing Concepts.** Implementation of marketing concepts in a real-world setting through participation in marketing projects with area companies. Additional prerequisite: Consent of instructor.

**Topic 4: Global Marketing.** May be used in place of International Business 372 in fulfilling the requirements of the major in international business.

**MKT 179C, 379C. Independent Research in Marketing.**

Restricted to students in a business major. Conference course. Only two of the following may be counted toward the Bachelor of Business Administration: Accounting 179C, 379C, Finance 179C, 379C, International Business 179C, 379C, Legal Environment of Business 179, 379, Management 179C, 379C, Management Information Systems 179, 379, Marketing 179C, 379C, Operations Management 179, 379, Real Estate 179C, 379C, Risk Management 179, 379. Prerequisite: Eighteen semester hours of coursework in business and economics, six of which must be upper-division; Marketing 337 or 337H with a grade of at least C-; and consent of instructor. A student registering for this course must obtain written approval from the department chair's office, on forms provided for that purpose, before the first meeting of the course.

# College of Communication

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Roderick Hart, PhD, *Dean*

Mark Bernstein, EdD, *Associate Dean, Student Affairs*

Stephen Reese, PhD, *Associate Dean, Academic Affairs*

Janice M. Daman, MBA, *Assistant Dean*

Darrell D. Rocha, BA, *Assistant Dean*

<http://communication.utexas.edu/>

## General Information

### Mission

In an increasingly crowded and complex world, communication plays many roles. Accurate communication from person to person and from individual to public is essential to understanding, and understanding is basic to intelligent agreement or disagreement. The swift exchange of information permits business to grow, stimulates public taste, and brings about change while helping individuals and institutions to adapt to change. Decreasing the time between the discovery of new knowledge by scientist, scholar, or industrial experimenter and the comprehension of this knowledge by large segments of the public counteracts inertia and spreads the benefits of such discoveries. Communication makes possible the marshaling of public opinion and increases the effectiveness of forces for political progress.

The academic discipline of communication combines the characteristics of an art and of a science. Those who study communication as an art seek to improve in themselves and in others the oral, written, and visual skills of exchanging information. As a science, communication emphasizes the objective study and investigation of this fundamental aspect of human behavior.

The degree programs of the College of Communication do not represent all of the academic disciplines concerned with the process of communication or the effects of communication on the individual and society. Engineering and physics shape and design the instruments by which communication is transmitted, and in the process become involved with human desires and reactions. Linguistics investigates the symbols by which human beings convey messages to each other. All language study bears on the process of communication. Art, drama, music, and literature are forms of communication. Psychology studies the relationship of communication to the individual, and sociology examines the impact of communication on society. Education relies heavily on effective communication. Thus the student who majors in the College of Communication should find relationships between the major and every course in the program. The major should give focus to the student's educational experience at the University. Those who minor in one of the communication fields should find means of increasing their personal effectiveness through developing skill in writing and speaking and in discerning the role of the mass media in the communication process in society.

### Facilities

In addition to the extensive library and computer resources of the University, certain special resources provide support for work in communication. Chief among them is the Jesse H. Jones Communication Center. Communication Building A (CMA) is a six-level building housing classrooms, offices, and sophisticated technology facilities. All facilities offer pervasive wireless Internet access and all instructional and production spaces feature high-definition equipment.

Communication Building B (CMB), a nine-level production building, houses Austin's public television station, KLRU. Also housed in Communication Building B are teaching and production facilities for the School of Journalism and the Department of Radio-Television-Film.

These facilities provide opportunities for academic programs that cross disciplinary lines, interrelate traditional and online media, and otherwise combine the resources of the College in ways not feasible within any one of the component units.

Although students have access to numerous computer labs across campus, they are encouraged to purchase personal laptop computers for their own use.

The Belo Center for New Media (BMC), which opened in summer 2012, is a 5-level 120,000 square-foot facility that weds cutting-edge technology with innovative teaching and research methods. The Belo Center is home to the KUT Public Broadcast Center, the School of Journalism, the Department of Advertising, and the College of Communication Dean's Office. With base funding provided by the Belo Foundation and the Decherd and Moroney families, the Belo Center serves as a striking gateway to the northwest side of the University of Texas campus. The Belo Center houses a multitude of instructional, research, and meeting spaces including a 300-seat auditorium, a 120-seat lecture hall, and an executive briefing facility, as well as a theatrical-grade 75-seat presentation room. The KUT Public Broadcast center is housed in a two-story, 20,000 square-foot wing which includes a 72-seat, glass-walled performance studio that incorporates the community into some of KUT's 300 annual in-studio performances.

## Financial Assistance Available through the College

The College of Communication and each academic unit have a large number of scholarships that are awarded annually. Students interested in receiving one of these scholarships should apply online early in the spring semester for scholarships to be awarded the following academic year. More information about college scholarships is available at <http://communication.utexas.edu/students/scholarships/> and from the Student Advising Office.

## Student Services

### Academic Advising

The Student Advising Office, in collaboration with the academic departments, oversees all advising in the college. To allow in-depth advising on specific programs of study, courses, and career choices in the major, each student is assigned an adviser. Students should meet with their advisers to select courses appropriate to the degree and to ensure that all degree requirements are met. In addition, students should consult their advisers for assistance in preparing for graduation.

### Career Services

Communication Career Services (CCS) provides a variety of career development and job/internship search assistance programs for students and alumni. The office's online systems link clients to the CCS job and internship databases and on-campus interviewing and résumé referral programs. Communication job and internship fairs, on-campus interviews, and a wide range of job search workshops and career exploration programs provide networking opportunities and allow students to explore their career options, gain experience, and build their career management skills. Individual career counseling, prelaw advising, and an extensive library and Web site offer additional



resources to help candidates research and prepare for the job market in a wide variety of media, communication, and related industries.

As a complement to the assistance available from the college, the University's Sanger Learning Center and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies provide career counseling services to all students. The centers offer professional career counseling, skill and interest inventories and tests, and assistance to students in choosing or changing their majors and considering graduate study.

The University makes no promise to secure employment for each graduate.

## Student Organizations

Student organizations provide an opportunity for students to meet fellow students within their major, learn about a major or career, hear from professionals in the field, and gain hands-on experience in club administration and leadership. One organization students may join is the Communication Council, the governing body for student activities in the college. The Communication Council acts as a representative of all undergraduate communication students and sponsors college-wide programs such as Communication Week and Senior Celebration as well as other events throughout the year. A complete list of student organizations in the college is available at <http://communication.utexas.edu/>.

## Admission and Registration

### Admission

#### Admission to the University

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information* (<http://catalog.utexas.edu/general-information>). Admission to a major may be restricted by the availability of instructional resources.

#### Admission Policies of the College

Students admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information*. Course credit used to remove deficiencies may not be counted toward the student's degree.

A few students who already have a bachelor's degree and who are not candidates for an advanced degree are admitted to the college each year as nondegree students. Such students are admitted only with the approval of the appropriate academic unit head and the dean.

### Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule* (<http://registrar.utexas.edu/schedules>), published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

Enrollment in upper-division courses in the College of Communication may be restricted because of limitations on instructional resources.

## Academic Policies and Procedures

### Honors

#### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

#### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

#### Senior Fellows Program

The Senior Fellows Program is a college-wide honors program providing a broad, interdisciplinary supplement to the student's major. The program is designed for students with the talent and interest to go beyond the usual undergraduate experience. Participants who complete four honors courses in communication with a grade of at least *B* in each course earn the distinction of Senior Fellow. The coursework is undertaken in conjunction with the student's degree requirements. Students with a grade point average of at least 3.30 are invited to apply to participate during their junior and/or senior years. Requirements for admission include completion of the formal application process, which includes a written statement of purpose indicating why the student wishes to be part of the program, and an interview with members of the faculty committee that oversees the program. Twenty-five to thirty students are selected for the program each year.

#### College Honors Programs

Each academic unit in the College of Communication offers an honors program to students majoring in the unit. Requirements for the programs vary, but all include (1) minimum grade point averages for admission to and continuance in the program; (2) three to six semester hours of honors coursework; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.

Each academic unit encourages eligible students to apply for admission to the honors program. Students who complete the program receive a certificate indicating "Special Honors in (name of field)." This notation also appears on the student's academic record.

#### Advertising Honors Program

Students who plan to seek special honors in advertising should apply to the department undergraduate adviser for admission to the honors program upon completion of sixty semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.50



and a grade point average in advertising of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Advertising 373H, *Integrated Communications Campaigns: Honors*, and Advertising 379H, *Honors Tutorial Course*, with a grade of at least *B* in each; (2) a University grade point average of at least 3.50 and a grade point average in advertising of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Advertising.

## Communication Sciences and Disorders Honors Program

Students who plan to seek special honors in communication sciences and disorders should apply to the department undergraduate adviser for admission to the honors program upon completion of ninety semester hours of coursework. A University grade point average of at least 3.00 and a grade point average in communication sciences and disorders of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Communication Sciences and Disorders 359H, *Honors Tutorial Course: Reading*, with a grade of at least *B-*; (2) Communication Sciences and Disorders 379H, *Honors Tutorial Course: Special Project*, with a grade of at least *B-*; (3) a University grade point average of at least 3.00 and a grade point average in communication sciences and disorders of at least 3.50; and (4) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Communication Sciences and Disorders.

## Communication Studies Honors Program

Students who plan to seek special honors in communication studies should consult the communication studies undergraduate adviser upon completion of seventy-five semester hours of coursework. A University grade point average of at least 3.00 and a grade point average in communication studies of at least 3.50 are required for admission to the honors program. The requirements for graduation with special honors are (1) a major in communication studies; (2) Communication Studies 359H, *Honors Tutorial Course: Reading*, with a grade of at least *B-*; (3) Communication Studies 379H, *Honors Tutorial Course: Special Project*, with a grade of at least *B-*; (4) a University grade point average of at least 3.00 and a grade point average in communication studies of at least 3.50; and (5) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Communication Studies.

## Journalism Honors Program

Students who plan to seek special honors in journalism should apply to the School of Journalism adviser for admission to the honors program upon completion of sixty semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.50 and a grade point average in journalism of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Journalism 379H, *Honors Tutorial Course*, with a grade of at least *B*; (2) a University grade point average of at least 3.50 and a grade point average in journalism of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Journalism.

## Public Relations Honors Program

Students who plan to seek special honors in public relations should apply to the public relations adviser for admission to the honors

program upon completion of sixty semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.50 and a grade point average in public relations of at least 3.50 are required for admission. The requirements for graduation with special honors are (1) Public Relations 377H, *Integrated Communications Campaigns: Honors*, and Public Relations 379H, *Honors Tutorial Course*, with a grade of at least *B* in each; (2) a University grade point average of at least 3.50 and a grade point average in public relations of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Public Relations.

## Radio-Television-Film Honors Program

Students who plan to seek special honors in radio-television-film should apply to the department chair for admission to the honors program upon completion of seventy-five semester hours of coursework; they must apply no later than upon completion of ninety semester hours. A University grade point average of at least 3.00 and a grade point average in radio-television-film of at least 3.50 are required for admission to and continuation in the honors program. The requirements for graduation with special honors are (1) two semesters of Radio-Television-Film 378H, *Honors Tutorial Course*, with a grade of at least *B-* each semester; (2) a University grade point average of at least 3.00 and a grade point average in radio-television-film of at least 3.50; and (3) completion in residence at the University of at least sixty semester hours of coursework counted toward the degree of Bachelor of Science in Radio-Television-Film.

## Concentrations and Certificates

### Communication and Society Concentration

This concentration is designed for consumers and creators of messages in public contexts. It is open only to students in majors outside the College of Communication; any noncommunication student may enroll in any of these courses for which he or she meets the prerequisite. In addition to fulfilling the prerequisite, the student must have a University grade point average of at least 2.25 to enroll in any upper-division course in the College of Communication.

The communication and society concentration requires eighteen semester hours of coursework, consisting of two required courses and twelve hours of electives; nine hours of the elective work must be in upper-division courses. Of the eighteen semester hours required for the concentration, at least twelve must be completed in residence. At any time after enrolling in his or her last concentration course, the student should fill out a concentration completion form in the Student Advising Office. The form must be submitted by the deadline to apply for graduation in the student's final semester. Students who complete the concentration will receive verification.

A student who wishes to use the concentration to fulfill minor requirements should make certain these courses meet the requirements of his or her college.

### Concentration Courses

#### Required Courses

Communication 309, *Communication Technology and Society*  
Radio-Television-Film 305, *Introduction to Media Studies*

#### Electives

Advertising 315, *History and Development of Advertising*

Communication 316M, *Race, Ethnicity, and the Media*  
 Communication Studies 306M, *Professional Communication Skills*  
 Communication Studies 332K, *Theories of Persuasion*  
 Communication Studies 342K, *Political Communication*  
 Journalism 350F, *Media Law*  
 Journalism 364E, *The Mass Media and Society*

## Sports Media Certificate

The Sports Media Certificate is designed to complement a student's education by developing his or her proficiency and knowledge in the area of sports media. A student may enroll in any of the certificate-accepted courses for which he or she meets the prerequisites, including a University grade point average of at least 2.25 to enroll in any upper-division course in the College of Communication. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree receive recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine semester hours of the certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University.

Advertising and public relations majors may count these courses towards their degree but are ineligible for the certificate because University policy precludes a student from earning any transcript-recognized certificate in the same field as his or her major. Kinesiology majors may not count Kinesiology 350, *Sociological Aspects of Sport and Physical Activity*, and Kinesiology 354, *Sport and Event Marketing*, towards the certificate. Sport management majors may not count Advertising 378S (Topic 1: *Advertising and Public Relations for Sport*), Public Relations 378S (Topic: *Advertising and Public Relations for Sports*), and Kinesiology 355, *Media and Public Relations in Sport*, towards the certificate.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

The certificate program requires eighteen semester hours of coursework as described below. Nine hours must be taken at the upper-division level and at least nine hours must be taken in residence. The certificate requirements are:

1. Advertising 305, *Fundamentals of Advertising*
2. Advertising 350, *Advertising Internship*
3. Approved topic of Advertising 378, *Advanced Studies in Advertising*, or Journalism 348G, *The Business of Sports Media*
4. Nine hours of coursework to be selected from:
  - a. Approved topic of Advertising 377, *Advertising Media Topics*
  - b. Advertising 378S (Topic 1: *Advertising and Public Relations for Sports*) or Public Relations 378S (Topic 1: *Advertising and Public Relations for Sports*), or Kinesiology 355, *Media and Public Relations in Sport*
  - c. Advertising 378S (Topic 2: *Legal Aspects of Sports and Media*) or Public Relations 378S (Topic 2: *Legal Aspects of Sports and Media*)

- d. Advertising 378S (Topic 3: *Return on Investment for Sports Media*) or Public Relations 378S (Topic 3: *Return on Investment for Sports Media*)
- e. Advertising 378S (Topic 4: *Analysis of Sports and Entertainment Audiences*) or Public Relations 378S (Topic 4: *Analysis of Sports and Entertainment Audiences*)
- f. Advertising 378S (Topic 5: *Ethics and Social Issues in Sports Branding*) or Public Relations 378S (Topic 5: *Ethics and Social Issues in Sports Branding*)
- g. Communication 325S (Topic 1: *Sports, Media and the Integration of American Society*)
- h. Communication Studies 347K, *Rhetoric of Popular Culture*
- i. Journalism 326F, *Reporting Sports*
- j. Journalism 349G, *Sports Journalism*
- k. Radio-Television-Film 359 (Topic: *Youth and Social Media*)
- l. Kinesiology 350, *Sociological Aspects of Sport and Physical Activity*
- m. Kinesiology 354, *Sport and Event Marketing*

5. Earn a grade of at least C or better in each course

Additional electives may be offered on a semester-by-semester basis.

## US Latino and Latin American Media Studies Certificate

This concentration is designed to introduce students to United States Latino and Latin American issues in communication and the media and to give them the opportunity to prepare for professional work related to these areas in addition to their major. The certificate program requires eighteen hours of coursework, including at least nine hours completed in residence. Students must fulfill the following requirements:

1. Communication 316M, *Race, Ethnicity, and the Media*, or Radio-Television-Film 316M, *Race, Ethnicity, and the Media*
2. Nine hours of upper-division elective coursework chosen from the list of approved electives available in the College of Communication
3. Six additional hours (upper or lower division) of elective coursework in Latin American Studies or Mexican American Studies
4. All courses must be taken for a letter grade, and only courses with a grade of C or better will be counted.

Any College of Communication student may enroll in any of the concentration courses for which he or she meets the prerequisite. The student must have a University grade point average of at least 2.25 to enroll in any upper-division course in the college.

The student must submit an application form online to the Office of Student Affairs in order to enroll in the US Latino and Latin American Media Studies Certificate Program. Certain course prerequisites, for approved courses in the College of Communication, may be waived once the student is accepted to the program.

Each degree program in the college imposes a limit on the number of hours in the college that may be counted toward the degree; each also imposes limits on the number of hours in the major that may be counted. For students who complete the US Latino and Latin

American media studies certificate, these limits may be modified with the approval of the Student Advising Office.

Students must apply for the transcript-recognized academic certificate at the time they complete their degree or the certificate program, whichever comes later.

Students should consult the Student Advising Office for additional information about the program and the coursework that meets concentration requirements. The courses that may be counted toward the certificate include, but are not limited to, the following:

#### *Required Course*

Communication 316M, *Race, Ethnicity, and the Media* or Radio-Television-Film 316M, *Race, Ethnicity, and the Media*

#### *Electives*

Advertising 334, *International Advertising*

Advertising 378, *Advanced Studies in Advertising*

Advertising 378 (Topic 2: *Advanced Issues in Multicultural Markets*)

Advertising 378 (Topic 9: *Consumer Discrimination in the Marketplace*)

Journalism 340C (Topic 1: *Mass Media and Minorities*)

Journalism 349T (Topic 4: *International Reporting*)

Journalism 349T (Topic 7: *Oral History as Journalism*)

Journalism 349T (Topic 10: *Covering the US Latino Community*)

Journalism 367E, *Journalism in Latin America*

Public Relations 378, *Advanced Studies in Public Relations*

Radio-Television-Film 359S (Topic: *Brazilian Media and Culture*)

Radio-Television-Film 359S (Topic: *Brazilian Film: Documentary vs. Narrative Interpretation*)

Radio-Television-Film 365 (Topic: *Immigrant Media*)

Radio-Television-Film 365 (Topic 6: *Contemporary Issues: Latinos and Media*)

Radio-Television-Film 365 (Topic: *Race, Class, and Media*)

Radio-Television-Film 366K (Topic 4: *East Austin Stories*)

Six additional hours to be selected from Latin American Studies and/or Mexican American Studies are also required.

## Courses for Teacher Preparation

The college does not currently offer a teaching certification program for any of its degrees. Students who wish to pursue teacher certification should consult the teacher certification officer in the College of Education.

## Graduation

### Special Requirements of the College

All students must fulfill the General Requirements (p. 18) for graduation given in The University section. Students in the College of Communication must also fulfill the following requirements.

1. All University students must have a grade point average of at least 2.00 to graduate. In the College of Communication, a student who fails to achieve this grade point average in the normal 120 hours required for a degree may register for up to forty additional hours in order to do so.
2. All communication majors must have a grade of at least C in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol CR.

3. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. In the College of Communication, these sixty hours must include at least eighteen hours of upper-division coursework and at least six hours of upper-division coursework in the major.
4. A candidate for a degree must be registered in the College of Communication either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar. Information about applying for graduation is given below.
5. An Air Force, Army, or Naval Reserve Officer Training Corps student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the student's government contract is completed or the student is released from the ROTC.
6. Each degree program is arranged to provide for the orderly progress of the student's coursework. A beginning student (including a transfer student with fewer than forty-eight semester hours of transferable credit) who registers for twelve semester hours or more must take at least nine semester hours, in at least three courses, of the coursework listed as prescribed work for one of the degrees in the College of Communication. The student must continue to take at least nine semester hours of the prescribed work each long-session semester until he or she has completed forty-eight semester hours of credit. The dean may adjust this rule in exceptional circumstances, or when the student has earned credit by examination, or when the student registers for fewer than twelve hours in a long-session semester.
7. No student in the College of Communication may repeat for credit a course in which he or she has earned a grade of C or better.

## Degree Audit

Students should verify the coursework they have completed and the coursework still needed for the degree by reviewing a degree audit at least once each semester with an adviser in the Student Advising Office. The degree audit is a computer-generated report of the student's progress in completing degree requirements. He or she may also create, print, and review an audit online through ida, the Interactive Degree Audit system; information about ida is available at <http://registrar.utexas.edu/students/degrees/ida/>.

Although the degree audit normally provides an accurate statement of requirements, the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill those requirements. Because the student is responsible for registering for the courses needed to fulfill degree requirements, he or she should seek an official ruling in the Student Advising Office before registering if in doubt about any requirement.

## Applying for Graduation

To graduate, a student must be registered in the College of Communication and must file a graduation application with the Student Advising Office. A student who is enrolled in residence must submit the application online at <http://communication.utexas.edu/students/graduation-information>. A student who is not currently enrolled should



contact the Student Advising Office about the process to graduate in absentia.

The graduation application should be filed at the beginning of the student's last semester; it must be filed no later than the deadline given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

## Degrees and Programs

### Degrees Offered

In the College of Communication, six undergraduate degrees are offered: Bachelor of Science in Advertising, Bachelor of Science in Communication Sciences and Disorders, Bachelor of Science in Communication Studies, Bachelor of Journalism, Bachelor of Science in Public Relations, and Bachelor of Science in Radio-Television-Film. In addition to the core curriculum, the requirements of each degree consist of special requirements, prescribed work, and major requirements; these are given later in this chapter under the heading for the degree. In addition, the student must fulfill the University-wide Graduation Requirements (p. 18) and the Special Requirements of the College (p. 79) of Communication.

A student may not earn more than two undergraduate degrees from the College of Communication. A student may not earn both the Bachelor of Science in Advertising and the Bachelor of Science in Public Relations.

### The Minor

While a minor is not required as part of any communication degree program, the student may choose to complete a minor in a field outside the College of Communication. A student may complete only one minor. The minor consists of at least fifteen semester hours in a single field of study, including at least nine hours of upper-division coursework. Nine of the fifteen hours must be completed in residence. A course to be counted toward the minor may not be taken on the pass/fail basis unless the course is offered only on that basis. Only one course counted toward the core curriculum, prescribed work, and major requirements for the student's degree may also be counted toward the minor.

If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the fifteen hours may be lower-division but must include at least nine hours beyond course 507 or the equivalent.

All minors must be approved by the student's academic adviser.

The College of Communication allows the student to minor in any field outside the college in which the University offers a major. However, prerequisites and other enrollment restrictions may prevent the student from pursuing a minor in some fields. Before planning to use specific courses to make up the minor, the student should consult the department that offers those courses.

## Degree Requirements

### Writing Requirement

As part of the prescribed work for all degrees in the college, students must complete two courses with a writing flag. If the writing requirement is not fulfilled by courses specified for the degree, the

student must complete writing courses as electives or in addition to the number of hours required for the degree. Courses that carry a writing flag are identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>).

## Communication and Culture Requirements

As part of the prescribed work for all degrees, students must complete three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses used to fulfill this requirement may also be used to fulfill the cultural diversity in the United States flag requirement and other degree requirements. Multicultural courses include, but are not limited to, the following; all courses that fulfill this requirement are identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>).

Advertising 316, *Creativity and American Culture*  
Advertising 353, *Advertising and Public Relations Law and Ethics*  
Advertising 378 (Topic: *Integrated Communication in Latino Entertainment*)  
Advertising 378 (Topic: *Sports/Media/Integration of American Society*)  
Advertising 378 (Topic 2: *Advanced Issues in Multicultural Markets*)  
Advertising 378 (Topic: *African Americans and the Media*)  
Communication 316M, *Race, Ethnicity, and the Media*  
Communication Studies 314L, *Language, Communication, and Culture*  
Communication Studies 340K, *Communication and Social Change*  
Communication Studies 355K, *Intercultural Communication*  
Communication Studies 365K, *Male-Female Communication*  
Communication Studies 367 (Topic: *Language and Culture*)  
Communication Sciences and Disorders 308K, *Perspectives on Deafness*  
Communication Sciences and Disorders 314L, *Sociocultural Bases of Communication*  
Communication Sciences and Disorders 360M, *Communication and Deaf People*  
Journalism 335, *Narrative Journalism*  
Journalism 340C (Topic 1: *Mass Media and Minorities*)  
Journalism 340C (Topic 2: *African Americans and the Media*)  
Journalism 340C (Topic 3: *Journalism and Religion*)  
Journalism 340C (Topic 4: *Leadership, Management, and the Media*)  
Journalism 340C (Topic 5: *Women and the News*)  
Journalism 340C (Topic 10: *Covering Latino Community in the United States*)  
Journalism 340C (Topic: *African American Athletes and the Media*)  
Journalism 359T (Topic: *Sports/Media/Integration of American Society*)  
Public Relations 353, *Advertising and Public Relations Law and Ethics*  
Public Relations 378 (Topic: *Integrated Communication in Latino Entertainment*)  
Public Relations 378 (Topic: *Sports/Media/Integration of American Society*)  
Radio-Television-Film 331K (Topic 1: *Cult Movies and Gender Issues*)  
Radio-Television-Film 331K (Topic 2: *Television and Theories of Gender*)  
Radio-Television-Film 335 (Topic: *Race/Class/Gender in American Television*)  
Radio-Television-Film 345 (Topic: *History of Black American Cinema*)  
Radio-Television-Film 359 (Topic: *Asian American Media Cultures*)  
Radio-Television-Film 359S (Topic 1: *Hispanic Images and Counterimages*)  
Radio-Television-Film 365 (Topic 4: *History of United States Latino Media*)  
Radio-Television-Film 359S (Topic 2: *Women and Media Culture*)  
Radio-Television-Film 365 (Topic 6: *Latinos and Media*)

## Applicability of Certain Courses

### Internship Credit

Some communication degree programs require an internship; in other programs, students may elect to complete an internship. In either case, the student must be a communication major and must meet the prerequisite for the internship course. Up to but no more than four semester hours of credit in internship courses may be counted toward the student's degree.

### Physical Activity Courses

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They are counted among courses for which a student is enrolled, and the grades are included in the grade point average. However, these courses may not be counted toward a degree in the College of Communication.

### ROTC Courses

No more than nine semester hours of credit for air force science, military science, or naval science courses may be counted toward any degree in the College of Communication. Such coursework may be counted only as lower-division electives in degree programs that have room for such electives, and only by students who have completed the third and fourth years of the ROTC program. ROTC courses may not be substituted for any specific required course.

## Concurrent Enrollment and Correspondence and Extension Courses

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the College of Communication unless specifically approved in advance by the dean. Requests to take communication courses by correspondence or extension are normally disapproved. A student in his or her final semester may not enroll concurrently at another institution in any course that is to be counted toward the degree. No more than 30 percent of the semester hours required for any degree offered in the College of Communication may be taken by correspondence.

## Courses Taken on the Pass/Fail Basis

A student in the College of Communication may count toward the degree up to fifteen semester hours of coursework in elective subjects outside the College of Communication taken on the pass/fail basis. No course required for the degree and taken in residence may be taken pass/fail, unless the course is offered only on that basis. The student may also take examinations for credit in elective subjects on the pass/fail basis; credit earned by examination is not counted toward the total of five courses that the student may take on this basis. If a student chooses to major in a subject in which he or she has taken a course pass/fail, the academic unit that offers the major determines whether the course may be counted toward the student's major requirements. Complete rules on registration on the pass/fail basis are given in *General Information*.

## Bible Courses

No more than twelve semester hours of Bible courses may be counted toward a degree.

## Bachelor of Science in Advertising

To be awarded the degree of Bachelor of Science in Advertising, the candidate must complete 120 semester hours of coursework and must fulfill the University's General Requirements (p. 18) for graduation and Core Curriculum (p. 22) requirements, the college graduation requirements given in Special Requirements of the College (p. 79), and the requirements given in Special Requirements, Prescribed Work, and Major Requirements below.

## Areas of Study

Students majoring in advertising specialize in one of three programs: Texas Advertising Management, Texas Creative, or Texas Media. Admission to the Texas Creative and Texas Media programs is by an application process; students who are not interested in or accepted into either of these programs will complete the Texas Advertising Management program. All advertising majors must complete the requirements of their specialization, as well as the requirements listed in the preceding paragraph.

## Texas Advertising Management Program

This program is designed for students interested in a variety of professional careers, including account planning and advertising management positions in a wide range of advertising, sales promotion, direct response, promotional products, and related agencies. Students planning to work for advertisers, such as manufacturing or service companies, rather than for agencies, may also meet their goals through the Texas Advertising Management program. The program focuses on an integrated approach in which communication problems are addressed with a variety of tools, including advertising, public relations, sales promotion, and direct response. Students must complete Advertising 378 (Topic 20: *Account Planning*); three hours from Advertising 378 (Topic 4, 17, or 19); three hours from Advertising 377M (Topic 1, 2, or 3); and three additional hours of coursework in advertising.

## Texas Creative Program

This program is designed to mold talented students into skilled advertising copywriters and art directors. To achieve that goal, it focuses on the creative and strategic thinking required to make the highest quality advertising messages. The program consists of Advertising 343K, *Portfolio I*; 468K, *Portfolio II*; and 468L, *Portfolio III*. In these three courses, students are expected to learn conceptual and critical thinking skills, computer design and page layout skills, and copywriting. The sequence also helps students develop the portfolio of creative work that is required of those seeking jobs in advertising.

Students who complete Advertising 325 with a grade of at least *B* may apply for admission to the Texas Creative program. Applications are generally distributed during the last week of class, and decisions are posted the following week. Students who are accepted into the program may enroll in Advertising 343K the following semester; those who are not accepted may apply again the following semester, but students may apply only twice. Student work is reviewed each



semester, and advancement through the program is contingent upon the quality of portfolio development.

## Texas Media Program

This program is designed to help students develop the characteristics that define success in advertising media planning, buying, sales, new media development, and metrics. Because advertising media is a broad and quickly evolving industry, the program offers a variety of courses, allowing students to focus their training and allowing the program itself to adapt to industry developments.

Students who complete Advertising 345J with a grade of at least *B* may apply for admission to the Texas Media program. Applications are distributed during the last week of classes. Admission decisions are made at the end of the semester and students admitted to the program are notified by a Secure Academic Note prior to the next add/drop registration period. Those who are not admitted may apply again the following semester, but students may apply only twice.

All Texas Media students must complete Advertising 377 (Topic 1: *Advanced Media Strategies*), Advertising 377 (Topic 3: *Digital Media*), and Advertising 377M (Topic 7: *Media Negotiation*). In addition, Texas Media students may choose to take at least one additional media upper-division course, which can be counted as an Advertising elective. Advertising 377 or 377M may be taken concurrently if all prerequisites are met. Most students complete the program in two semesters.

## The Consent Procedure

Part of the prerequisite for some advertising courses is consent of the instructor received prior to registering. To be able to register for such a course, a student must first ask for and receive the instructor's consent. The student may be invited to an interview with the instructor or may be asked to provide supporting materials, such as an application or an essay. The student is responsible for knowing the deadline to apply. Consent forms are available from the student's adviser and in the Department of Advertising.

## Special Requirements

To enroll in upper-division advertising courses, a student must have completed Advertising 318J in residence with a grade of at least *B*, and must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill these requirements will be dropped from upper-division advertising courses, normally before the twelfth class day. The grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average. Students may enroll in Advertising 318J no more than twice.

In addition, advertising majors must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree and a grade of at least *C* in each course counted toward the major requirements; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22), as well as the requirements for the Bachelor of Science in Advertising listed below under Prescribed Work. In some cases, a course required

for the BSAdv may also be counted toward the core curriculum; these courses are identified below.

## Prescribed Work

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag. Courses that fulfill this requirement are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given in the Communication and Culture Requirement (p. 80) section under the College of Communication's Degrees and Programs section; a complete list is available in the college's Student Advising Office before registration for each semester and summer session. The courses are also identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>).
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis. Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency. The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence. An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.
5. Statistics and Scientific Computation 306, completed in residence. This course also meets the core curriculum mathematics requirement.
6. Twelve semester hours of coursework in the McCombs School of Business, preferably three hours in marketing, three hours in accounting, three hours in either legal environment of business or finance, and three hours in management. At least six of the twelve hours must be in upper-division coursework. Marketing 338 may not be used to fulfill this requirement.
7. At least thirty-six semester hours of upper-division coursework.
8. No more than twelve semester hours of transfer credit in advertising may be counted toward the degree.
9. Enough additional coursework to make a total of 120 semester hours. No more than forty-two hours in advertising and no more than thirty-six hours in any other single field may be counted toward the degree.

## Major Requirements

In addition, the following coursework is required to complete the following programs:

Texas Advertising Management: Advertising 378 (Topic 20); Advertising 378 (Topic 4, 17, or 19); and Advertising 377M (Topic 1, 2, or 3).

Texas Creative: Advertising 343K, 468K, and 468L (note: Advertising 468L is part of the twenty-four required advertising hours for Creative students).

Texas Media: Advertising 377 (Topics 1 and 3), and Advertising 377M (Topic 7).

1. At least thirty-six but no more than forty-two semester hours of advertising, of which at least twenty-four hours must be upper-division. The following courses are required: Advertising 318J, 325, 344K, 345J, 350 or 468L, 370J, 353 or 376, and 373. The student must complete Advertising 318J in residence with a grade of at least *B*.
2. At least six semester hours of coursework must be taken in the College of Communication but outside the department. However, no student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework. However, no student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree and no course to be counted toward major requirement 1 above may be taken on the pass/fail basis, unless the course is offered only on that basis.

## Order and Choice of Work

### First Year

1. The student must take three courses from the following group each semester:
  - A. Rhetoric and Writing 306.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in a foreign language.
2. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

### Second Year

1. The student must take three courses from the following group each semester; four are recommended:
  - A. English 316K and any three-semester-hour course in English or rhetoric and writing.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in the foreign language, unless the language requirement has been fulfilled.

2. Advertising 318J.
3. Statistics and Scientific Computation 306.
4. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester. Basic courses in business, studio art, and computer sciences are especially recommended.

### Third and Fourth Years

1. Two courses with a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. The remaining courses listed as major requirements.
4. Upper-division electives chosen to support the major. Advertising majors normally emphasize economics, government, history, English, sociology, psychology, marketing, or management.

## Bachelor of Science in Communication Sciences and Disorders

To be awarded the degree of Bachelor of Science in Communication Sciences and Disorders, the candidate must complete 120 semester hours of coursework and must fulfill the University's General Requirements (p. 18) for graduation and the Core Curriculum (p. 22) requirements, the college graduation requirements given in Special Requirements of the College (p. 79), and the requirements given in Special Requirements, Prescribed Work, and Major Requirements below.

### Special Requirements

To enroll in upper-division communication sciences and disorders courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be dropped from upper-division communication sciences and disorders courses, normally before the twelfth class day. This requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

In addition, a student with a major in communication sciences and disorders must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

### Core Curriculum

All students must complete the University's Core Curriculum (p. 22), as well as the requirements for the Bachelor of Science in Communication Sciences and Disorders listed below under Prescribed Work. In some cases, a course required for the BSCSD may also be counted toward the core curriculum; these courses are identified below.

## Prescribed Work

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag. Courses that fulfill this requirement are identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>). They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given in the Communication and Culture Requirement (p. 80) section under the College of Communication's Degrees and Programs section; a complete list is available in the college's Student Advising Office before registration for each semester and summer session. The courses are also identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>).
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis. Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Coursework in American Sign Language may be used to fulfill this requirement. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer credit in communication sciences and disorders may be counted toward the degree.
7. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree.

## Special Emphases in Communication Sciences and Disorders

Students majoring in communication sciences and disorders may specialize in speech/language pathology, audiology, or education of the deaf/hearing-impaired. After completing the necessary undergraduate coursework, they may seek the graduate degrees that are required for professional accreditation by the American Speech-Language-Hearing Association (for those in speech/language pathology and audiology) or the Council on Education of the Deaf (for those in education of the deaf/hearing-impaired). Students in speech/

language pathology and audiology who wish to practice in Texas must be licensed by the Texas Department of State Health Services; those in education of the deaf/hearing-impaired must be certified by the Texas State Board for Educator Certification.

## Major Requirements

1. Students specializing in speech/language pathology must complete at least thirty-seven semester hours of coursework in communication sciences and disorders; those specializing in audiology must complete at least thirty-seven hours; those specializing in education of the deaf/hearing-impaired must complete at least thirty-two hours. For students in all three specializations, fifteen hours of this coursework must be upper-division. No more than forty-three semester hours of coursework in communication sciences and disorders may be counted toward the degree. The following courses are required:
  - A. Speech/language pathology: Communication Sciences and Disorders 306K, 308K, 311K, 313L, 318K, 118L, 341, 350, 358, 358S, 367K, 371, and 373.
  - B. Audiology: Communication Sciences and Disorders 306K, 308K, 311K, 313L, 318K, 118L, 341, 350, 358, 358S, 367K, 371, and 373.
  - C. Education of the deaf/hearing-impaired: Communication Sciences and Disorders 308K, 311K, 313L, 314L, 318K, 118L, 341, 360M, 367K, 373, and four hours of 175N.
2. At least six semester hours of coursework must be taken in the College of Communication but outside communication sciences and disorders. However, no student may count toward the degree more than forty-nine semester hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

## Order and Choice of Work

### First Year

1. The student must take three courses from the following group each semester:
  - A. Rhetoric and Writing 306.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in a foreign language. Students in education of the deaf/hearing-impaired are encouraged to take American Sign Language.
2. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

### Second Year

1. The student must take three courses from the following group each semester; four are recommended:

- A. English 316K and any three-semester-hour course in English or rhetoric and writing.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Communication Sciences and Disorders 306K (for students in speech/language pathology or audiology) or 308K (for students in education of the deaf/hearing-impaired) and other lower-division courses in communication sciences and disorders recommended by the student's adviser.
  3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester.

### Third and Fourth Years

1. Two courses with a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. The remaining courses listed as major requirements.
4. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester.

## Bachelor of Science in Communication Studies

To be awarded the degree of Bachelor of Science in Communication Studies, the candidate must complete 120 semester hours of coursework and fulfill the University's General Requirements (p. 18) for graduation and the Core Curriculum (p. 22) requirements, the college graduation requirements given in Special Requirements of the College (p. 79), and the requirements given in Special Requirements, Prescribed Work, and Major Requirements below.

### Special Requirements

Students may take no more than nine hours of communication studies coursework, including transfer work, before they have declared a major in communication studies. Exceptions may be made for students who have officially declared a communication studies minor with their colleges, and for communication studies courses taken during a summer session. Students minoring in communication studies may take only the number of hours required for the minor.

To enroll in upper-division communication studies courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be dropped from upper-division communication studies courses, normally before the twelfth class day. This requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

In addition, a student with a major in communication studies must have a grade of at least C in each course taken in the College of Communication that is counted toward the degree; if the course is

offered on the pass/fail basis only, the student must have the symbol CR.

A student majoring in communication studies may not register for more than nine semester hours of communication studies in one semester or summer session.

### Core Curriculum

All students must complete the University's Core Curriculum (p. 22), as well as the requirements for the Bachelor of Science in Communication Studies listed below under Prescribed Work. In some cases, a course required for the BSCommStds may also be counted toward the core curriculum; these courses are identified below.

### Prescribed Work

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.

2. Two courses with a writing flag; one course with a quantitative reasoning flag; one course with an ethics and leadership flag; and one course with a cultural diversity in the United States flag. Courses that fulfill these requirements are identified in the Course Schedule. They may also be used to fulfill other degree requirements.

### Major Requirements

1. At least thirty but no more than thirty-six semester hours of communication studies. At least fifteen hours must be in upper-division coursework. Each student must complete one of the following tracks:

#### a. *Corporate Communication*

1. Communication Studies 306M, 313M, and 332K.
2. Six semester hours chosen from the following courses: Communication Studies 310K, 316L, 320, 335, 337, 338, 341, 346, 350M, 370K, and 372K.
3. Fifteen additional semester hours of communication studies.

#### b. *Human Relations*

1. Communication Studies 306M and 332K.
2. Nine semester hours chosen from the following courses: Communication Studies 314L, 315M, 330, 334K, 344K, 354, 355K, 357, 358, 370K, and 371K.
3. Fifteen additional semester hours of communication studies.

#### c. *Political Communication*

1. Communication Studies 306M, 317C, and 332K.
2. Nine semester hours chosen from the following courses: Communication Studies 331K, 332, 333, 340K, 342K, 345, and 370K.
3. Twelve additional semester hours of communication studies.

2. At least six semester hours of coursework must be taken in the College of Communication but outside communication studies. However, no student may count toward the degree more than forty-two



semester hours (including transfer credit) in College of Communication coursework.

3. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

## Order and Choice of Work

### First Year

1. The student must take three courses from the following group each semester:
  - A. Rhetoric and Writing 306.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in a foreign language.
2. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

### Second Year

1. The student must take three courses from the following group each semester; four are recommended:
  - A. English 316K and any three-semester-hour course in English or rhetoric and writing.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Lower-division communication studies courses recommended by the student's adviser.
3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester.

### Third and Fourth Years

1. Two courses with a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. The remaining courses listed as major requirements. Students should note that some upper-division courses have a series of prerequisite courses that takes up to three semesters to complete.
4. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester.

## Bachelor of Journalism

To be awarded the degree of Bachelor of Journalism, the candidate must complete 120 semester hours of coursework and must fulfill the University's General Requirements (p. 18) for graduation and the Core Curriculum (p. 22) requirements, the college graduation requirements given in Special Requirements of the College (p. 79), and the requirements given in Special Requirements, Prescribed Work, and Major Requirements below.

Journalism courses are divided into five levels of coursework and more narrowly within the levels according to their skill set and writing content. Not all courses are offered every semester.

Level I, Foundations: Journalism 301F, 302F, and 303F

Level II, Applications: Journalism 310F and 311F

Level III, Specialized Issues and Skills:

- *Category 1-Public Affairs Reporting*: Journalism 320F, 321F, 322F, 323F, 324F, 325F, 326F
- *Category 2-Specialized Journalistic Skills*: Journalism 330F, 331F, 332F, 333F, 334F, 335F, 336F, 338F, 339F, 330G, 331G, 332G, 333G, 334G, 335G, 336G, 337G
- *Category 3-Understanding and Reporting Social Issues*: Journalism 340F, 341F, 342F, 343F, 344F, 346F, 347F, 348F, 349F, 340G, 341G, 342G, 343G, 344G, 345G, 346G, 347G, 348G, 349G, 340J, 341J

Level IV, Professional Principles: Journalism 350F, 351F, 352F, 353F

Level V, Professional Practices: Journalism 359T (Topic: *Journalism Capstone*), 360F, 160G, 361F, 379, 379

Courses in Levels II – V have prerequisites appropriate to their skill level. Prerequisites may include testing, an interview, or other procedures. Information about these additional requirements is available from the School of Journalism adviser.

## Special Requirements

All students in the journalism program are strongly encouraged to have a laptop computer meeting certain specifications as they enter Level II courses. Computer parameters will be designated by the School of Journalism on the department website at <http://journalism.utexas.edu>.

Students will be required to take Journalism 302F, 310F, and 311F in residence. In addition, Journalism 310F and 311F require a grade of at least *B*.

Students who are interested in completing advanced photojournalism courses are required to take Communication 316, *Photographic Communication*, as part of their required six hours of coursework in communication.

To enroll in upper-division journalism courses, a student must have a University grade point average of at least 2.25, a grade point average in courses in the College of Communication of at least 2.00, and credit for Journalism 310F and 311F with a grade of at least *B*. Students who do not fulfill this requirement will be unable to register for upper-division journalism courses. The 2.25 grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

Journalism majors must complete Journalism 360F or Journalism 361F in order to graduate. Internships can be taken for course credit as soon

as a student completes the two Level II courses with a grade of at least *B* in each.

The student must complete at least eighty-four semester hours outside journalism. At least sixty-five hours must be in liberal arts and natural sciences.

A student majoring in journalism may not register for more than nine semester hours in journalism in one semester or summer session. The director or associate director may make exceptions to this rule for students who need additional journalism courses in order to graduate on time.

A student with a major in journalism must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

Additional information about the preceding requirements is available from the School of Journalism at <http://journalism.utexas.edu/> or (512) 471-1845.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22) as well as the prescribed work for the Bachelor of Journalism listed below. In some cases, a course required for the Bachelor of Journalism may also be counted toward the core curriculum; these courses are identified below. Flag descriptions can also be found in Core Curriculum (p. 22).

## Prescribed Work

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag; one course with a quantitative reasoning flag; one course with a global cultures flag; one course with a cultural diversity in the United States flag; one course with an ethics and leadership flag; and one course with an independent inquiry flag. A single course may not carry both the cultural diversity in the United States and the global cultures flags simultaneously. Courses that fulfill these requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or non-dominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree and flag requirements. A partial list of these communication and culture courses is given in the Communication and Culture Requirement (p. 80) section under the College of Communication's Degrees and Programs section; a complete list is available in the college's Student Advising Office before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on a pass/fail basis.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement

if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Center for Teaching and Learning or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer credit in journalism may be counted toward the degree.
7. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree, except as indicated under Major Requirements below.

## Major Requirements

1. Journalism students must complete thirty-six semester hours in journalism and no more than thirty-six journalism hours may be counted toward the degree.
2. The following courses are required: Journalism 301F, 302F, 310F, 311F, 350F, 359T (Topic: *Journalism Capstone*), and 360F or 361F. Journalism 302F, 310F, and 311F must be taken in residence and a grade of at least *B* is required for 310F and 311F.
3. At least nine semester hours but not more than fifteen semester hours from Level III, Specialized Issues and Skills, as follows:
  - a. at least three semester hours to be chosen from Journalism 320F, 321F, 322F, 323F, 324F, 325F, 326F
  - b. at least three semester hours to be chosen from Journalism 330F, 331F, 332F, 333F, 334F, 335F, 336F, 337F, 338F, 339F, 330G, 331G, 332G, 333G, 334G, 335G, 336G, 337G
  - c. at least three semester hours to be chosen from Journalism 340F, 341F, 342F, 343F, 344F, 345F, 346F, 347F, 348F, 349F, 340G, 341G, 343G, 344G, 345G, 346G, 347G, 348G, 349G, 340J, 341J
4. At least six semester hours of coursework must be taken in the College of Communication but outside the School of Journalism. No more than forty-two hours (including transfer credit) in College of Communication coursework may be counted toward the degree.
5. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

## Order and Choice of Work

### First Year

1. The student must take three courses from the following group each semester:
  - a. Rhetoric and Writing 306.
  - b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum. Students who plan to concentrate in photojournalism are encouraged to take

courses in chemistry, physics, and mathematics to fulfill the science and technology areas.

c. Courses in a foreign language.

2. Journalism 301F and 302F.
3. Students who plan to take advanced photojournalism courses are encouraged to take Communication 316 in their second semester as part of their required six hours of coursework in communication but outside of journalism.
4. Two courses that meet flag requirements.
5. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college academic adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

## Second Year

1. The student should take three courses from the following group each semester; four are recommended:

- a. English 316K and any three-semester-hour course in English or rhetoric and writing.
- b. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
- c. Courses in the foreign language, unless the language requirement has been fulfilled.
  2. Journalism 310F and 311F and additional coursework to fulfill the major requirements.
  3. Two courses that meet flag requirements.
  4. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college academic adviser.

## Third Year

1. Two courses that meet flag requirements.
2. Any remaining courses in the core curriculum and the prescribed work.
3. Journalism Level III and IV coursework to fulfill the major requirements. Courses should be chosen with the guidance of a college academic adviser.
4. Journalism 360F or 361F, if the prerequisites have been met.
5. Upper-division electives chosen to support the major.

## Fourth Year

1. Upper-division electives chosen to support the major.
2. Any remaining major requirements from Levels III, IV, and V. Courses should be chosen with the guidance of a college academic adviser.
3. Journalism 359T (Topic: *Journalism Capstone*).
4. Any remaining flag requirements.

5. Any remaining courses in the core curriculum and the prescribed work.

# Bachelor of Science in Public Relations

To be awarded the degree of Bachelor of Science in Public Relations, the candidate must complete 120 semester hours of coursework and must fulfill the University's General Requirements (p. 18) for graduation and the Core Curriculum (p. 22) requirements, the college graduation requirements given in Special Requirements of the College (p. 79), and the requirements given in Special Requirements, Prescribed Work, and Major Requirements below.

## The Consent Procedure

Part of the prerequisite for some advertising and public relations courses is consent of the instructor received prior to registering. To be able to register for such a course, a student must first ask for and receive the instructor's consent. The student may be invited to an interview with the instructor or may be asked to provide supporting materials, such as an application or an essay. The student is responsible for knowing the deadline to apply. Consent forms are available online and in the Department of Advertising.

## Special Requirements

To enroll in upper-division public relations courses, a student must have completed Advertising 318J in residence with a grade of at least *B* and must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill these requirements will be dropped from upper-division public relations courses, normally before the twelfth class day. The grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average. Students may enroll in Advertising 318J no more than twice.

In addition, a student with a major in public relations must have a grade of at least *C* in each course taken in the College of Communication that is counted toward the degree and a grade of at least *C* in each course counted toward the major requirements; if the course is offered on the pass/fail basis only, the student must have the symbol *CR*.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22) as well as the requirements for the Bachelor of Science in Public Relations listed below under Prescribed Work. In some cases, a course required for the BSPR may also be counted toward the core curriculum; these courses are identified below.

## Prescribed Work

1. Rhetoric and Writing 309K, 309S, or 310.
2. Two courses with a writing flag. Courses that fulfill this requirement are identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>). They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within

the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given in the Communication and Culture Requirement (p. 80) section under the College of Communication's Degrees and Programs section; a complete list is available in the college's Student Advising Office before registration for each semester and summer session. The courses are also identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>).

4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis. Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. Statistics and Scientific Computation 306, completed in residence. This course also meets the core curriculum mathematics requirement.
6. Twelve semester hours of coursework in business, preferably three hours in marketing, three hours in management, three hours in accounting, and three hours in either legal environment of business or finance. At least six of the twelve hours must be in upper-division coursework. Marketing 338 may not be counted toward this requirement.
7. At least thirty-six semester hours of upper-division coursework.
8. No more than twelve semester hours of transfer credit may be counted toward the major requirements given below.
9. Enough additional coursework to make a total of 120 semester hours. No more than thirty-six semester hours in one field of study may be counted toward the degree.

## Major Requirements

1. At least thirty-six but no more than forty-two semester hours of coursework, of which at least twenty-four hours must be upper-division. The following courses are required:
  - A. Advertising 318J, 344K, 345J, Public Relations 317, 319 or 331, 348, 350, 352, 353, 367, or 376, and 377K. The student must complete Advertising 318J in residence with a grade of at least B.
  - B. Three additional hours in public relations or advertising.

2. At least six semester hours of coursework must be taken in the College of Communication but outside advertising and public relations. No student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree and no course to be counted toward major requirement 1 above may be taken on the pass/fail basis, unless the course is offered only on that basis.

## Order and Choice of Work

### First Year

1. The student must take three courses from the following group each semester:
  - A. Rhetoric and Writing 306.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in a foreign language.
2. Advertising 318J and Public Relations 317.
3. Additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

### Second Year

1. The student must take three courses from the following group each semester; four are recommended:
  - A. Rhetoric and Writing 306; English 316K; and Rhetoric and Writing 309K, 309S, or 310.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in the foreign language, unless the language requirement has been fulfilled.
2. Public Relations 319.
3. Statistics and Scientific Computation 306.
4. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester. Basic courses in writing are especially recommended.

### Third Year

1. Two courses with a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. Public Relations 348, Advertising 344K, 345J, Marketing 320F, and additional coursework to fulfill the major requirements.



4. Upper-division electives chosen to support the major. Public relations majors normally emphasize writing courses, such as those in English, journalism, and liberal arts; public speaking courses, such as those in communication studies; psychology; marketing; and/or management.

## Fourth Year

1. The remaining courses listed as major requirements.
2. Upper-division electives chosen to support the major.

# Bachelor of Science in Radio-Television-Film

To be awarded the degree of Bachelor of Science in Radio-Television-Film, the candidate must complete 120 semester hours of coursework and must fulfill the University's General Requirements (p. 18) for graduation and the Core Curriculum (p. 22) requirements, the college graduation requirements given in Special Requirements of the College (p. 79), and the requirements given in Special Requirements, Prescribed Work, and Major Requirements below.

## Special Requirements

To enroll in upper-division radio-television-film courses, a student must have a University grade point average of at least 2.25 and a grade point average in courses in the College of Communication of at least 2.00. Students who do not fulfill this requirement will be dropped from upper-division radio-television-film courses, normally before the twelfth class day. The grade point average requirement is waived for the transfer student during the first semester of coursework, while he or she is establishing a University grade point average.

In addition, a student with a major in radio-television-film must have a grade of at least C in each course taken in the College of Communication that is counted toward the degree; if the course is offered on the pass/fail basis only, the student must have the symbol CR.

To enroll in some upper-division radio-television-film courses, the student must earn specific grades in prerequisite courses. In addition, enrollment in a few upper-division courses requires the consent of the instructor. The departmental consent process is described in Department of Radio-Television-Film (p. 112); complete course prerequisites are given in Radio-Television-Film: RTF Lower-Division Courses (p. ) and Upper-Division Courses (p. ).

It is not recommended that a student majoring in radio-television-film register for more than nine semester hours in radio-television-film in one long-session semester or more than six semester hours in a summer session.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22), as well as the requirements for the Bachelor of Science in Radio-Television-Film listed below under Prescribed Work. In some cases, a course required for the BSRTF may also be counted toward the core curriculum; these courses are identified below.

## Prescribed Work

1. Three semester hours in English or rhetoric and writing in addition to the courses required by the core curriculum.
2. Two courses with a writing flag and one course with a cultural diversity in the United States flag. Courses that fulfill these requirements are identified in the *Course Schedule* (<http://registrar.utexas.edu/schedules>). They may also be used to fulfill other degree requirements.
3. Three semester hours of coursework in the College of Communication dealing with the study of communication issues concerning at least one minority or nondominant group within the United States. Courses that fulfill this requirement may also be used to fulfill other degree requirements. A partial list of these communication and culture courses is given in the Communication and Culture Requirement (p. 80) section under the College of Communication's Degrees and Programs section; a complete list is available from the college's Student Advising Office before registration for each semester and summer session. The courses are also identified in the *Course Schedule*.
4. Students must demonstrate fourth-semester-level proficiency, or the equivalent, in a foreign language. Courses taken to meet this requirement may not be taken on the pass/fail basis. Students who enter the University with a foreign language deficiency must take the first two semesters in a foreign language without degree credit to remove the deficiency.

The usual course sequence is 406 or 506, 407 or 507 or 508K, 312K, and 312L. For some languages, different course numbers are used; such courses may be counted toward this requirement if they are designed to provide first-semester-level through fourth-semester-level proficiency. Credit may be earned by examination for any part of the sequence.

An extensive foreign language testing program is available at the University. Students with knowledge of a language are encouraged to take appropriate tests both to earn as much credit as possible and to be placed at the proper level for further study. Students should consult the Division of Instructional Innovation and Assessment or the department concerned for information on testing.

5. At least thirty-six semester hours of upper-division coursework.
6. No more than twelve semester hours of transfer credit in radio-television-film may be counted toward the degree.
7. Enough additional coursework to make a total of 120 semester hours. No more than forty-two hours in radio-television-film and no more than thirty-six hours in any other single field may be counted toward the degree.

## Major Requirements

1. At least thirty but no more than forty-two semester hours of radio-television-film, of which at least eighteen hours must be upper-division. All students must take Radio-Television-Film 305, nine additional hours of lower-division coursework, and two courses chosen from the following: Radio-Television-Film 330K, 331J, 331K, 331M, 331N, 331P, 334, 335, 342, 342T, 345, 347C, 348, 359, 359S, 365, and 370.

2. At least six semester hours of coursework must be taken in the College of Communication but outside the department. However, no student may count toward the degree more than forty-eight hours (including transfer credit) in College of Communication coursework.
3. No College of Communication course to be counted toward the degree may be taken on the pass/fail basis, unless the course is offered only on that basis.

- A. English 316K and any three-semester-hour course in English or rhetoric and writing.
- B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
- C. Courses in the foreign language, unless the language requirement has been fulfilled.

2. Two lower-division courses in radio-television-film, including those that are prerequisite to the area(s) in which the student plans to take upper-division courses.
3. Enough additional coursework, if needed, to raise the student's course load to fifteen or sixteen hours each semester.

## Areas of Study

The curriculum in radio-television-film is designed to prepare students to be versatile and well-equipped for positions in fields related to media. The program aims to train students to analyze the role of communication media in societies, to write and speak well, and to create media projects and programs. The curriculum is multidisciplinary and includes courses in the history and analysis of media systems, including film, television, and new media; global media; production and screenwriting; digital media; critical and cultural studies; ethnic, gender, and minority studies; and communication technologies and policies. Each student's program of study is planned by the student and an undergraduate adviser to meet the student's academic and professional goals. Because upper-division courses require specific lower-division prerequisites, students should consider their lower-division preparation carefully. For example, many production courses require completion of Radio-Television-Film 317 and 318, while nonproduction courses require either Radio-Television-Film 314 or 316, or 309. Radio-Television-Film 305 is required of all majors.

Students who plan to take production courses should be aware that these courses may require five to ten hours of independent production or studio time a week in addition to the class meetings listed in the *Course Schedule*. All costs of production, such as the cost of film and film processing, actors' fees, and location fees, are borne by the student. The cost of most equipment is covered by tuition.

## Order and Choice of Work

### First Year

1. The student must take three courses from the following group each semester:
  - A. Rhetoric and Writing 306.
  - B. Courses to be counted toward the American history, American and Texas government, social and behavioral sciences, mathematics, and science and technology requirements of the core curriculum.
  - C. Courses in a foreign language.
2. Radio-Television-Film 305 and one of the following: Radio-Television-Film 309, 312C, 314, 316, 316M.
3. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester. Courses should be chosen with the guidance of a college adviser.

First-year students may not take two beginning foreign language courses in the same semester. First-year students may not take more than eight semester hours in one department.

### Second Year

1. The student must take three courses from the following group each semester; four are recommended:

## Third and Fourth Years

1. Two courses with a writing flag.
2. Any remaining courses in the core curriculum and the prescribed work.
3. Two upper-division radio-television-film courses to be counted toward requirement 1 of the major requirements.
4. Twelve to twenty-four semester hours of upper-division coursework in radio-television-film.
5. Enough additional coursework to raise the student's course load to fifteen or sixteen hours each semester.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://catalog.utexas.edu/general-information>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Communication

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### Communication: COM

#### Lower-Division Courses

##### COM 301C. Freshman Seminar.

Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and

museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.

### **COM 102D, 202D, 302D. Connecting Internship Experience.**

Supervised internship experience related to interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 102D, three hours of fieldwork a week for one semester; for 202D, six hours of fieldwork a week for one semester; for 302D, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines Program research coordinator, may be repeated once for credit. May not be counted toward any College of Communication degree. Prerequisite: Admission to the Bridging Disciplines Programs.

### **COM 309. Communication Technology and Society.**

Same as Radio-Television-Film 309. Study of communication technologies, from writing to the Internet; their uses in interpersonal, group, mass, and international contexts; and the impact of technologies on work. Three lecture hours and one discussion hour a week for one semester.

### **COM 310. Topics in Texas Sports and Media.**

Introduction to various contemporary and historical issues, emphasizing interdisciplinary perspectives and critical discourse. Three lecture hours a week for one semester. Communication 310 and Journalism 313S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **COM 314. Special Topics in Communication.**

Contemporary issues and practices in communication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **COM 115, 215, 315. Topics in Leadership and Communication.**

Restricted to students in the College of Communication. Contemporary issues, practices, and skills related to leadership and communication. For 115, two lecture hours a week for eight weeks; for 215, two lecture hours a week for one semester; for 315, three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **COM 316 (TCCN: COMM 1316). Photographic Communication.**

Introduction to photographic technique and recent trends, evaluation, visual design, and use of images in the media. Students must provide their own 35-mm single-lens reflex or digital camera that can be operated under manual mode and with off-camera flash. Three lecture hours and one and one-half laboratory hours a week for one semester. Communication 316 and Journalism 316 may not both be counted.

### **COM 316M. Race, Ethnicity, and the Media.**

Same as Radio-Television-Film 316M. Critical review of contemporary and historical media images of, and discourses on, race and ethnicity. Introduction to relevant communication research and institutions. Three lecture hours and one discussion hour a week for one semester. Fulfills the communication and culture requirement in the College of Communication. Prerequisite: A major in the College of Communication.

### **COM 118C, 218C, 318C. Forum Seminar Series.**

Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

### **COM 119, 219, 319, 419, 519, 619. International Learning Seminars.**

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Communication 119, 219, 319, 419, 519, 619 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

### **COM 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Communication.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Communication Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **COM 320. Advanced Topics in Texas Sports and Media.**

Critical assessment of various contemporary and historical issues, emphasizing interdisciplinary perspectives. Three lecture hours a week for one semester. Communication 320 and Journalism 326S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Completion of at least sixty semester hours of coursework and a University grade point average of at least 2.25.

### **COM 124, 224, 324. Topics and Skills in Communication.**

Contemporary issues, practices, and skills related to communication and the entertainment industries, including studies in the business of entertainment, the creative process, and contemporary Hollywood cinema. For each semester hour of credit earned, one lecture hour a week for one semester. Taught in Los Angeles, California. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Radio-Television-Film 305, admission to the Semester in Los Angeles program, and a University grade point average of at least 2.25.

### **COM 125, 225, 325. Topics in Leadership and Communication.**

Restricted to students in the College of Communication. Contemporary issues, practices, and skills related to leadership and communication. For 125, two lecture hours a week for eight weeks; for 225, two lecture hours a week for one semester; for 325, three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **COM 325S. Issues in Sports Media.**

Special topics in the role and convergence of sports and the media. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Sports, Media, and the Integration of American Society.** Role and convergence of sports, entertainment, and the media in American society and culture from Reconstruction through the present, including the role of institutions in these categories and their relationship to the integration of American society. Only one of the following may be counted: Advertising 378 (Topic: Sports, Media, and the Integration of American Society), Communication 325 (Topic: Sports, Media, and the Integration of American Society), 325S (Topic 1), Journalism 359T (Topic: Sports, Media, and the Integration of American Society), Public Relations 378 (Topic: Sports, Media, and the Integration of American Society). Prerequisite: Upper-division standing and a University grade point average of at least 2.25.

### **COM 129, 229, 329, 429, 529, 629. International Learning Seminars.**

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Communication 129, 229, 329, 429, 529, 629 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **COM 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Communication.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the appropriate College of Communication department. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **COM 330. Research in Texas Sports and Media.**

Same as Journalism 339S. Supervised research with a faculty member; research may consist of an individual project or assisting a faculty research project. Hours to be arranged. May be repeated for credit. Prerequisite: Completion of at least sixty semester hours of coursework, a University grade point average of at least 2.25, and consent of the department.

### **COM 350. Communication Internship.**

Restricted to students in the College of Communication with upper-division standing. Practical work experience related to the student's area of interest in the communication field. An average of 10 hours of work a week, for a total of at least 150 hours a semester or summer term. May not be taken by students who have credit for any three-semester-hour communication internship course. Offered on the pass/fail basis only. Prerequisite: Completion of the prerequisite for the three-semester-hour internship course in the student's major department. Applications are available in the college's career services office and must be submitted by the sixth class day in a long-session semester and by the second class day in the summer term.

### **COM 350L. Semester in Los Angeles Internship.**

Practical work experience in the entertainment industry in Los Angeles. An average of 10 hours of work a week, for a total of at least 150 hours a semester or summer term. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, Radio-Television-Film 305, admission to the Semester in Los Angeles program, and a University grade point average of at least 2.25.

### **COM 360. Communication Research Design.**

An introduction to sampling, measurement, data collection, and analytic procedures as applied to research problems in communication. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **COM 370. Advanced Study in Communication.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, admission to the College of Communication Senior Fellows Program, and consent of instructor.

### **COM 178. Communication Internship.**

Restricted to students in the College of Communication with upper-division standing. Practical work experience related to the student's area of interest in the communication field. An average of 10 hours of work a week, for a total of at least 150 hours a semester or summer term. May be repeated, but only one hour may be counted toward a degree in the College of Communication. Offered on the pass/fail basis only. Prerequisite: Completion of a three-hour internship course in the College of Communication. Applications are available in the college's career services office and must be submitted by the sixth class day in a long-session semester and by the second class day in the summer term.

## **Department of Advertising**

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

To enroll in any upper-division advertising course, an advertising major must have fulfilled the Special Requirements (p. 82) for the Bachelor of Science in Advertising.

### **Advertising: ADV**

#### **Lower-Division Courses**

##### **ADV 303. Advertising and Popular Culture.**

An introduction to the role advertising plays in American society, and the values and relationships offered in the messages that are delivered. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising degree.

##### **ADV 304. Advertising on the Internet.**

The defining concepts, differences, and current practices of advertising on the Internet. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. May not be counted toward the Bachelor of Science in Advertising degree.

##### **ADV 305. Fundamentals of Advertising.**

Fundamentals and practices of advertising in relation to economies, societies, and mass communication. Three lecture hours a week for



one semester. May not be counted toward the Bachelor of Science in Advertising degree.

### **ADV 309R. Introduction to Advertising and Public Relations Research.**

Same as Public Relations 309. Restricted to advertising and public relations majors. Introduction to concepts and methods of statistics, with emphasis on analyzing personal and group behaviors. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 309R, 378 (Topic: Introduction to Advertising and Public Relations Research), Public Relations 309, 378 (Topic: Topic: Introduction to Advertising and Public Relations Research).

### **ADV 314. Social and Ethical Issues.**

Designed to prepare students to identify, analyze, and respond to social and ethical issues in advertising and public relations. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising or the Bachelor of Science in Public Relations degrees.

### **ADV 315. History and Development of Advertising.**

The evolution and development of advertising in the United States in a social, historical, economic, and cultural context. Three lecture hours a week for one semester.

### **ADV 316. Creativity and American Culture.**

Same as Public Relations 316. A cross-disciplinary view of the creative process and creative products. The conceptual core of film, fine arts, advertising, architecture, and literature. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising or the Bachelor of Science in Public Relations. Fulfills the communication and culture requirement in the College of Communication.

### **ADV 318J. Introduction to Advertising and Integrated Brand Communication.**

The functions of advertising; role in marketing/communications mix; economic and social influence; advertising institutions and media; campaigns and appropriations; retail and business-to-business aspects. Three lecture hours and one discussion hour a week for one semester. Students may not enroll in Advertising 318J more than twice.

### **ADV 319. Psychology of Advertising.**

A review of basic findings of the behavioral sciences dealing with perception, personality, group behavior, psychological appeals, and their application to advertising as persuasive communication. Three lecture hours a week for one semester.

## **Upper-Division Courses**

### **ADV 325. Introduction to Advertising Creativity.**

Restricted to advertising and public relations majors. Development of concepts and problem-solving techniques for print and broadcast advertising design and copywriting. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Advertising 318J with a grade of at least B.

### **ADV 334. International Advertising.**

Major issues in international advertising and advertising directed at cultural minorities within countries. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **ADV 336. Multicultural Issues in Advertising and Public Relations.**

Special topics exploring the impact of the major social, economic, and cultural aspects of advertising and public relations on ethnic and cultural groups in the United States. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Advanced Issues in Multicultural Markets.** Research in diversity in advertising; understanding human diversity; trends in United States demographics. Three lecture hours a week for one semester. Advertising 336 (Topic 1) and 378 (Topic 2: Advanced Issues in Multicultural Markets) may not both be counted. Prerequisite: Upper-division standing.

#### **Topic 2: Consumer Discrimination in the Marketplace.**

Consumer discrimination of ethnic and racial groups in the marketplace. Three lecture hours a week for one semester. Advertising 336 (Topic 2) and 378 (Topic 9: Consumer Discrimination in the Marketplace) may not both be counted. Prerequisite: Upper-division standing.

**Topic 3: Advertising and Black Representation.** Focus on the opportunities created by the growing number of African American consumers who express their social identities in the marketplace. Three lecture hours a week for one semester. Advertising 336 (Topic 3) and 378 (Topic 12: Advertising and Black Representation) may not both be counted. Prerequisite: Upper-division standing.

**Topic 4: Consumer Insight.** A framework for analyzing consumer cognition, attitudes, and behavior by looking at both material from the behavioral sciences and techniques of consumer analysis used in marketing practice. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 336 (Topic 4), 378 (Topic 25: Consumer Insight), 391K (Topic: Consumer Insight). Prerequisite: Upper-division standing.

### **ADV 342. Advertising Copywriting.**

Copywriting for print and broadcast media. Methods for developing creative advertising concepts, strategies, and executions for print, radio, and television. Emphasis on writing rather than on art direction. Three lecture hours a week for one semester. Prerequisite: Advertising 325 with a grade of at least C, and instructor's approval of the student's previous work in advertising courses.

### **ADV 343K. Portfolio I.**

Basic advertising art direction and copywriting skills, including indications for graphics, headlines, and body copy. Three lecture hours and three studio hours a week for one semester. Prerequisite: Advertising 325 with a grade of at least B, and admission to the Texas Creative program.

### **ADV 344K. Advertising Research.**

Introduction to social science research methods as used in advertising and marketing; emphasis on survey research and secondary data. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing; Advertising 318J with a grade of at least B; and Advertising 309R, Public Relations 309, Statistics 309, or Statistics and Scientific Computation 306 with a grade of at least C.

Advertising majors must also have credit or registration for Advertising 325.

#### **ADV 345J. Advertising Media Planning Foundations.**

Media characteristics and media-market measurements; development of media plans. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing; Advertising 318J with a grade of at least B; and Advertising 309R, Public Relations 309, Statistics 309, or Statistics and Scientific Computation 306 with a grade of at least C. Advertising majors must also have credit or registration for Advertising 325.

#### **ADV 447. Computer Imaging Topics.**

Introduction to computer graphics with applications to advertising and other disciplines. Students interact with computer systems to produce artwork and design portfolios. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Advertising 318J with a grade of at least B and consent of instructor received prior to registering.

##### **Topic 1: Advertising Design for Interactive Media.**

#### **ADV 348. Design of Integrated Communications.**

Theory and practice of the graphic arts and production, including conception and design; typography; engraving; preparation of copy, art, and photographs; paper; color psychology; and printing. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ADV 350. Advertising Internship.**

Practical work experiences in advertising sales, creative management, and research with advertisers, agencies, media, or auxiliary services. An average of twelve hours of work a week, for a total of 180 hours a semester or summer session. Offered on the pass/fail basis only. Prerequisite: Advertising 344K and 345J with a grade of at least C in each.

#### **ADV 151. Advertising Practicum.**

Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Advertising 350 or 468K, consent of departmental internship coordinator, and completion of department requirements for enrollment in an internship course.

#### **ADV 353. Advertising and Public Relations Law and Ethics.**

Same as Public Relations 353. The equivalent of three lecture hours a week for one semester. Only one of the following may be counted: Advertising 353, 371J, 376, Public Relations 353, 371J, 376. Fulfills the communication and culture requirement in the College of Communication. Prerequisite: For advertising majors, Advertising 318J with a grade of at least B; for public relations majors, Public Relations 319; for others, none.

#### **ADV 366. Special Topics in Advertising.**

Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising degree. May be repeated for credit when the topics vary.

#### **ADV 368C. Advertising Senior Seminar.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Credit or registration for

Advertising 370J and written consent of instructor received prior to registering.

##### **Topic 1: Agency Practices.**

##### **Topic 2: Affect and Emotion.**

##### **Topic 3: Advertising Ethics.**

#### **ADV 468K. Portfolio II.**

Intermediate advertising art direction and copywriting; special emphasis on execution skills and concepts. Three lecture hours and three studio hours a week for one semester. Prerequisite: Advertising 343K and consent of the Texas Creative program faculty.

#### **ADV 468L. Portfolio III.**

Advanced advertising art direction and advertising creative concepts. Three lecture hours and three studio hours a week for one semester. With consent of instructor, may be repeated once for credit. Prerequisite: Advertising 468K and consent of the Texas Creative program faculty.

#### **ADV 370J. Integrated Communications Management.**

Cases and problems dealing with the management of advertising and promotional programs; media and creative strategies; consumer, retail, industrial, and public service applications. Three lecture hours a week for one semester. Advertising 370J and Public Relations 367 may not both be counted. Prerequisite: Advertising 344K and 345J with a grade of at least C in each; and Marketing 320F or 337 with a grade of at least C.

#### **ADV 373. Integrated Communications Campaigns.**

Concept of media mix; matching product, consumer, media profiles; conception, research, planning, and execution of advertising campaigns; special emphasis on advanced copywriting, layout, and production for print and broadcast media. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 373, 373H, Public Relations 377H, 377K. Prerequisite: Advertising 370J or Public Relations 367.

#### **ADV 373H. Integrated Communications Campaigns: Honors.**

Restricted to students in the Advertising or Public Relations Honors program. The concept of media mix; matching product, consumer, and media profiles; and the conception, research, planning, and execution of advertising campaigns. Special emphasis on advanced copywriting, layout, and production for print and broadcast media. Students usually participate in major national contests involving brand development in advertising strategies. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 373, 373H, Public Relations 377H, 377K. Offered on the letter-grade basis only. Prerequisite: Upper-division standing, Advertising 370J or Public Relations 367, a University grade point average of at least 3.50, admission to the departmental honors program, and consent of the undergraduate adviser.

#### **ADV 374. Advanced Studies in Media and Negotiations.**

#### **ADV 475. Portfolio IV.**

Designed to enhance the intellectual and philosophical framework of students in the Texas Creative program. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Advertising 468L and consent of the Texas Creative program faculty.

### **ADV 376. Ethics in Advertising and Public Relations.**

Same as Public Relations 376. Designed to develop skills in identifying, analyzing, and responding to ethical issues. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 353, 371J, 376, 378 (Topic 8: Ethics in Advertising and Public Relations), Public Relations 353, 371J, 376. Prerequisite: Upper-division standing.

### **ADV 377. Advertising Media Topics.**

Three lecture hours a week for one semester or as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Admission to the Texas Media program and consent of instructor. Additional prerequisites vary with the topic and are given in the Course Schedule.

**Topic 1: Advanced Media Strategies.** Required for students in the Texas Media program.

**Topic 2: One-to-One Advertising on the Internet.** Students may be added to the class on the first class day. Additional prerequisite: Experience using HTML.

**Topic 3: Digital Media.** Students may be added to the class on the first class day. Additional prerequisite: Experience using HTML.

**Topic 4: Media Alliances.** Focuses on the partnerships and tools used in generating, investigating, and evaluating unique brand contact points such as product placement, sponsorships, and other promotional media activities. Includes co-branding efforts, client-generated media venues, and public relations alliances from a media planning perspective.

**Topic 5: Media Show.** Designed to help students remove the traditional barriers between message development and delivery in their media work. Students have the opportunity to show their work to industry professionals across a variety of venues. Three lecture hours and three studio hours a week for one semester.

**Topic 6: Media Research.**

### **ADV 377M. Media Studies.**

Topics in media and its effects on advertising and public relations strategies. The equivalent of three lecture hours a week for one semester; additional hours may be required for some topics. Advertising 377M and Public Relations 377M may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Advanced Media Research.** Development of data analysis skills using various analytical techniques. Three lecture hours a week for one semester. Advertising 377M (Topic 1) and 378 (Topic 13: Advanced Media Research) may not both be counted. Prerequisite: Upper-division standing.

**Topic 2: Advanced Studies in Media Sales.** Same as Public Relations 377M (Topic 2: Advanced Studies in Media Sales). Examination of advertising media sales beyond audience measurement techniques, and quantitative and qualitative data. The equivalent of three lecture hours a week for one semester. Only one of the following may be counted: Advertising 377M (Topic 2), 378 (Topic 14: Advanced Studies in Media Sales), Public Relations 377M (Topic 2), 378 (Topic 2: Advanced Studies in Media Sales). Prerequisite: Upper-division standing.

**Topic 3: Digital Metrics.** Examines the evolving scope of digital metrics and analytics by looking at three dimensions of digital media: business, communications, and technology. Three lecture hours a week for one semester. Advertising 377M (Topic 3) and 378 (Topic 16: Digital Metrics) may not both be counted. Prerequisite: Upper-division standing and consent of instructor.

**Topic 4: Nontraditional New Media Concepts.** Restricted to students in the Texas Creative program. Examination of how we consume and respond to media as it changes with new technology. Three lecture hours a week for one semester. Advertising 377M (Topic 4) and 378 (Topic 18: Nontraditional New Media Concepts) may not both be counted. Prerequisite: Upper-division standing and consent of instructor.

**Topic 5: Media Metrics.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 6: Media Research.** Three lecture hours a week for one semester. Advertising 377 (Topic: Media Research) and 377M (Topic 6) may not both be counted. Prerequisite: Upper-division standing.

**Topic 7: Media Negotiations.** Restricted to advertising and public relations majors in the Texas Media program. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **ADV 378. Advanced Studies in Advertising.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 4: Direct Marketing.** Additional prerequisite: Marketing 320F.

**Topic 7: Integrated Communication for Sports.**

**Topic 10: Copywriting.**

**Topic 11: Leadership and Ethics.**

**Topic 15: Creative Project: Writing.**

**Topic 17: Integrated Communication for Nonprofit Organizations.**

**Topic 19: Online Consumer Research.**

**Topic 20: Account Planning.**

**Topic 22: Psychology of Video Game Advertising.**

**Topic 23: Technology Marketing and Advertising.**

**Topic 24: Digital Creative Portfolio.**

**Topic 26: Consumer Psychology and New Media.**

**Topic 27: Advanced Media Research, Insights, and Analysis.**

**Topic 28: Online Consumer Behavior and Research.**

### **ADV 378S. Special Topics in Sports Media.**

Topics in sports media related to issues in traditional and new media as they affect sports and entertainment advertising and public relations. The equivalent of three lecture hours a week for one semester or as required by the topic. Advertising 378S and Public Relations 378S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Advertising 305S or Public Relations 305S with a grade of at least C; and a University grade point average of at least 2.25.

**Topic 1: Advertising and Public Relations for Sports.** Same as Public Relations 378S (Topic 1: Advertising and Public Relations for Sports). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 30: Advertising and Public Relations for Sports), 378S (Topic 1), Public Relations 378 (Topic 30: Advertising and Public Relations for Sports), 378S (Topic 1).

**Topic 2: Legal Aspects of Sports and Media.** Same as Public Relations 378S (Topic 2: Legal Aspects of Sports and Media). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 31: Legal Aspects of Sports and Media), 378S (Topic 2), Public Relations 378 (Topic 31: Legal Aspects of Sports and Media), 378S (Topic 2).

**Topic 3: Return on Investment of Sports Media.** Same as Public Relations 378S (Topic 3: Return on Investment of Sports Media). Three lecture hours a week for one semester. Only one of the

following may be counted: Advertising 378 (Topic 32: Sponsorships, Endorsements, Advertising, and Promotional Events for Sports and Entertainment), 378S (Topic 3), Public Relations 378 (Topic 32: Sponsorships, Endorsements, Advertising, and Promotional Events for Sports and Entertainment), 378S (Topic 3).

**Topic 4: Analysis of Sports and Entertainment Audiences.**

Same as Public Relations 378S (Topic 4: Analysis of Sports and Entertainment Audiences). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 33: Analysis of Sports and Entertainment Audiences), 378S (Topic 4), Public Relations 378 (Topic 33: Analysis of Sports and Entertainment Audiences), 378S (Topic 4).

**Topic 5: Ethics and Social Issues in Sports Branding.** Same as Public Relations 378S (Topic 5: Ethics and Social Issues in Sports Branding). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 34: Sports, Ethics, and Social Issues), 378S (Topic 5), Public Relations 378 (Topic 34: Sports, Ethics, and Social Issues), 378S (Topic 5).

**Topic 6: Sports Audiences and Nontraditional Media.**

Same as Public Relations 378S (Topic 6: Sports Audiences and Nontraditional Media). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 35: Sports Audiences and Nontraditional Media), 378S (Topic 6), Public Relations 378 (Topic 35: Sports Audiences and Nontraditional Media), 378S (Topic 6).

**Topic 7: Contributions of Sports and Entertainment to Education and Health.** Same as Public Relations 378S (Topic 7: Contributions of Sports and Entertainment to Education and Health). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 36: Contribution of Sports and Entertainment to Education and Health), 378S (Topic 7), Public Relations 378 (Topic 36: Contribution of Sports and Entertainment to Education and Health), 378S (Topic 7).

**ADV 379. Integrated Communication for Sports and Entertainment.**

Three lecture hours a week for one semester.

**ADV 379H. Honors Tutorial Course.**

Conference course of intensive study, planned by the Advertising Honors Committee; research and the writing of a substantial paper on a special advertising topic. Supervised individual special studies. Prerequisite: Admission to the departmental honors program and consent of the undergraduate adviser.

**ADV 179J, 279J, 379J, 479J. Advertising Problems.**

Individual instruction. Some topics may require additional laboratory hours. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor received prior to registering.

**Topic 1: Supervised Individual Special Studies.** Supervised individual special studies for which separate courses are not available.

**Topic 2: Supervised Individual Creative Studies.** Supervised individual creative studies for which separate courses are not available. Additional laboratory hours to be arranged.

**Topic 3: Supervised Individual Media Studies.** Supervised individual media studies for which separate courses are not available. Additional laboratory hours to be arranged. Additional prerequisite: Advertising 345J.

## Public Relations: P R

### Lower-Division Courses

**P R 305. Fundamentals of Public Relations.**

Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Public Relations degree.

**P R 309. Introduction to Advertising and Public Relations Research.**

Same as Advertising 309R. Restricted to advertising and public relations majors. Introduction to concepts and methods of statistics, with emphasis on analyzing personal and group behaviors. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 309R, 378 (Topic: Introduction to Advertising and Public Relations Research), Public Relations 309, 378 (Topic: Introduction to Advertising and Public Relations Research).

**P R 316. Creativity and American Culture.**

Same as Advertising 316. A cross-disciplinary view of the creative process and creative products. The conceptual core of film, fine arts, advertising, architecture, and literature. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Advertising or the Bachelor of Science in Public Relations. Fulfills the communication and culture requirement in the College of Communication.

**P R 317. Writing for Public Relations.**

Restricted to public relations majors. Introduction to writing skills for the media, including readability, clarity, verification, and style. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Advertising 318J with a grade of at least B.

**P R 319. Principles of Public Relations.**

Restricted to public relations majors. Principles, theory, history, ethics, and practice of public relations in a variety of organizational settings; elements of strategic management. Three lecture hours a week for one semester. Public Relations 319 and 331 may not both be counted. Prerequisite: Advertising 318J with a grade of at least B.

### Upper-Division Courses

**P R 331. Fundamentals of Media Relations.**

Strategic public relations decisions as they relate to media; investigation of ethical principles and norms regulating activity of public relations. Three lecture hours a week for one semester. May not be counted toward the major requirement for the Bachelor of Science in Public Relations degree. Public Relations 319 and 331 may not both be counted.

**P R 348. Public Relations Techniques.**

Analysis and production of print, electronic, and oral messages to achieve organizational objectives; fundamentals of media relations; Internet applications. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Upper-division standing; Public Relations 319 (or 333) or 331; and Journalism 315 or Public Relations 317.



### **P R 350. Public Relations Internship.**

Restricted to public relations majors. Internship to be arranged by student and approved by instructor. Internship to be arranged. May be taken only once. Offered on the pass/fail basis only. Prerequisite: Advertising 344K, 345J, and Public Relations 348 with a grade of at least C in each.

### **P R 151. Public Relations Internship.**

Designed for students who have completed a three-semester-hour internship in public relations. Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Public Relations 350; consent of the public relations internship coordinator; and completion of the major requirements for enrollment in an internship course.

### **P R 352. Strategies in Public Relations.**

Restricted to public relations majors. Strategies relating to public relations disciplines, including the management of external, internal, community, nonprofit, and media issues, and public relations marketing programs. Three lecture hours a week for one semester. Prerequisite: Public Relations 319 or 331, and 348.

### **P R 353. Advertising and Public Relations Law and Ethics.**

Same as Advertising 353. The equivalent of three lecture hours a week for one semester. Only one of the following may be counted: Advertising 353, 371J, 376, Public Relations 353, 371J, 376. Fulfills the communication and culture requirement in the College of Communication. Prerequisite: For advertising majors, Advertising 318J with a grade of at least B; for public relations majors, Public Relations 319; for others, none.

### **P R 367. Integrated Communications Management.**

Public relations as a managerial problem-solving process; strategic management of programs to enhance public-organizational relationships. Three lecture hours a week for one semester. Advertising 370J and Public Relations 367 may not both be counted. Prerequisite: Advertising 344K, 345J, and Marketing 320F with a grade of at least C in each; and Public Relations 348.

### **P R 374. Public Relations Publications.**

Production of controlled public relations media for internal and external publics; analysis of annual reports, trade magazines, and electronic publishing. Three lecture hours a week for one semester. Prerequisite: Public Relations 319 or 331, and 348, or consent of instructor; and Journalism 315 or one of the following courses: Rhetoric and Writing 309K, 309S, 325M, 379C (Topic: Grammar and Style for Writers).

### **P R 376. Ethics in Advertising and Public Relations.**

Same as Advertising 376. Designed to develop skills in identifying, analyzing, and responding to ethical issues. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 8: Ethics in Advertising and Public Relations), Public Relations 353, 371J, 376. Prerequisite: Upper-division standing.

### **P R 377H. Integrated Communications Campaigns: Honors.**

Restricted to students in the Advertising or Public Relations Honors Program. The concept of media mix; matching product, consumer, and media profiles; and the conception, research, planning, and execution of advertising campaigns. Special emphasis on advanced copywriting, layout, and production for print and broadcast media. Students usually participate in major national contests involving brand development in

advertising strategies. Three lecture hours a week for one semester, with additional hours to be arranged. Only one of the following may be counted: Advertising, 373, 373H, Public Relations 377H, 377K. Offered on the letter-grade basis only. Prerequisite: Upper-division standing, Advertising 370J or Public Relations 367, a University grade point average of at least 3.50, admission to the Advertising or Public Relations Honors Program, and consent of the undergraduate adviser.

### **P R 377K. Integrated Communications Campaigns.**

Integration of theory, research methods, and communication techniques for planning, implementing, and evaluating public relations campaigns; client proposal writing and presentation. Three lecture hours a week for one semester. Only one of the following may be counted: Advertising, 373, 373H, Public Relations 377H, 377K. Prerequisite: Public Relations 352; and Advertising 370J or Public Relations 367.

### **P R 377M. Media Studies.**

Topics in media and its effects on advertising and public relations strategies. The equivalent of three lecture hours a week for one semester; additional hours may be required for some topics. Advertising 377M and Public Relations 377M may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: Advanced Studies in Media Sales.** Same as Advertising 377M (Topic 2: Advanced Studies in Media Sales). Examination of advertising media sales beyond audience measurement techniques, and quantitative and qualitative data. The equivalent of three lecture hours a week for one semester. Only one of the following may be counted: Advertising 377M (Topic 2), 378 (Topic 14: Advanced Studies in Media Sales), Public Relations 377M (Topic 2), 378 (Topic 2: Advanced Studies in Media Sales). Prerequisite: Upper-division standing.

### **P R 378. Advanced Studies in Public Relations.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Ethics in Advertising and Public Relations.**

**Topic 3: Black Music and the Media.**

**Topic 4: Health Communication: Theory and Practice.**

**Topic 5: Integrated Communication for Nonprofit Organizations.**

**Topic 6: Public Relations in Entertainment.**

### **P R 378S. Special Topics in Sports Media.**

Topics in sports media related to issues in traditional and new media as they affect sports and entertainment advertising and public relations. The equivalent of three lecture hours a week for one semester or as required by the topic. Advertising 378S and Public Relations 378S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Advertising 305S or Public Relations 305S with a grade of at least C; and a University grade point average of at least 2.25.

**Topic 1: Advertising and Public Relations for Sports.** Same as Advertising 378S (Topic 1: Advertising and Public Relations for Sports). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 30: Advertising and Public Relations for Sports), 378S (Topic 1), Public Relations 378 (Topic 30: Advertising and Public Relations for Sports), 378S (Topic 1).

**Topic 2: Legal Aspects of Sports and Media.** Same as Advertising 378S (Topic 2: Legal Aspects of Sports and Media). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 31: Legal Aspects of Sports and Media), 378S (Topic 2), Public Relations 378 (Topic 31: Legal Aspects of Sports and Media), 378S (Topic 2).

**Topic 3: Return on Investment of Sports Media.** Same as Advertising 378S (Topic 3: Return on Investment of Sports Media). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 32: Sponsorships, Endorsements, Advertising, and Promotional Events for Sports and Entertainment), 378S (Topic 3), Public Relations 378 (Topic 32: Sponsorships, Endorsements, Advertising, and Promotional Events for Sports and Entertainment), 378S (Topic 3).

**Topic 4: Analysis of Sports and Entertainment Audiences.** Same as Advertising 378S (Topic 4: Analysis of Sports and Entertainment Audiences). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 33: Analysis of Sports and Entertainment Audiences), 378S (Topic 4), Public Relations 378 (Topic 33: Analysis of Sports and Entertainment Audiences), 378S (Topic 4).

**Topic 5: Ethics and Social Issues in Sports Branding.** Same as Advertising 378S (Topic 5: Ethics and Social Issues in Sports Branding). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 34: Sports, Ethics, and Social Issues), 378S (Topic 5), Public Relations 378 (Topic 34: Sports, Ethics, and Social Issues), 378S (Topic 5).

**Topic 6: Sports Audiences and Nontraditional Media.** Same as Advertising 378S (Topic 6: Sports Audiences and Nontraditional Media). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 35: Sports Audiences and Nontraditional Media), 378S (Topic 6), Public Relations 378 (Topic 35: Sports Audiences and Nontraditional Media), 378S (Topic 6).

**Topic 7: Contributions of Sports and Entertainment to Education and Health.** Same as Advertising 378S (Topic 7: Contributions of Sports and Entertainment to Education and Health). Three lecture hours a week for one semester. Only one of the following may be counted: Advertising 378 (Topic 36: Contribution of Sports and Entertainment to Education and Health), 378S (Topic 7), Public Relations 378 (Topic 36: Contribution of Sports and Entertainment to Education and Health), 378S (Topic 7).

#### **P R 179, 279, 379. Public Relations Problems.**

Individual instruction. Prerequisite: Public Relations 352.

#### **P R 379H. Honors Tutorial Course.**

Conference course of intensive study, planned by the Advertising Honors Committee; research and the writing of a substantial paper on a special public relations topic. Individual instruction. Prerequisite: Admission to the departmental honors program and consent of the undergraduate adviser.

## **Department of Communication Sciences and Disorders**

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

## **Communication Sciences and Disorders: CSD**

### **Lower-Division Courses**

#### **CSD 306K. Introduction to Communication Disorders.**

Introduction to the study of processes and disorders of speech, language, and hearing; observation in the University Speech and Hearing Center. Three lecture hours a week for one semester.

#### **CSD 308K. Perspectives on Deafness.**

Examination of deafness from a number of perspectives: social and psychological meanings of deafness, the deaf community, education of deaf children, sign languages, and historical trends. Three lecture hours a week for one semester. Fulfills the communication and culture requirement in the College of Communication.

#### **CSD 311K. Phonetic Description of Speech.**

Speech production, physiological analysis and description of speech sounds, voice quality, and voice dynamics; notation; phonetic theory; applications of phonetics. Three lecture hours a week for one semester.

#### **CSD 313L. Hearing Science.**

Acoustical, physiological, and psychological bases of normal human hearing; theories of audition; laboratory techniques in hearing science research. Three lecture hours a week for one semester.

#### **CSD 314L. Sociocultural Bases of Communication.**

An introduction to the influences of social and cultural factors, such as ethnicity, socioeconomic status, and geographic region, on communication acquisition and use, with a focus on cross-cultural communication issues in a diverse society. Three lecture hours a week for one semester.

#### **CSD 318K. Acquisition of Communicative Abilities in Children.**

Introduction to assessment procedures and treatment strategies for children with speech and language disorders. Three lecture hours a week for one semester. Communication Sciences and Disorders 318K and 368K may not both be counted. Prerequisite: Communication Sciences and Disorders 306K or 308K with a grade of at least C, and Communication Sciences and Disorders 311K with a grade of at least C.

#### **CSD 118L. Acquisition of Communicative Abilities in Children: Laboratory.**

Clinical laboratory experience in child language. One lecture hour a week for one semester. Communication Sciences and Disorders 118L and 168L may not both be counted. Prerequisite: Communication Sciences and Disorders 306K or 308K with a grade of at least C, and Communication Sciences and Disorders 311K with a grade of at least C.

### **Upper-Division Courses**

#### **CSD 341. Principles of Audiology.**

Causes of hearing disorders; diagnostic procedures and treatment. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and Communication Sciences and Disorders 313L with a grade of at least C.

**CSD 350. Language and the Brain.**

Same as Linguistics 350 (Topic 1: Language and the Brain). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CSD 358. Anatomy and Physiology of the Speech and Hearing Mechanism.**

In-depth study of the anatomy and physiology of structures involved in speech, language, hearing, and swallowing. Includes anatomical and physiological mechanisms of respiration, phonation, articulation, and hearing; and the central nervous system and blood supply to the speech and hearing mechanism. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 358, 393E (Topic 8: Anatomy and Physiology of the Speech and Hearing Mechanism), Linguistics 315. Prerequisite: Upper-division standing, Communication Sciences and Disorders 311K with a grade of at least C, and a University grade point average of at least 2.25.

**CSD 358S. Fundamentals of Speech Science.**

Same as Linguistics 358S. Neurophysiological mechanisms underlying the encoding and decoding of speech. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 358S, 396N, Linguistics 315, 358S. Prerequisite: Upper-division standing and a University grade point average of at least 2.25; for Communication Sciences and Disorders majors, Communication Sciences and Disorders 313L and 358 with a grade of at least C in each.

**CSD 359H. Honors Tutorial Course: Reading.**

Restricted to senior communication sciences and disorders majors. Intensive reading and research as planned by the departmental honors committee. Individual instruction. Prerequisite: Upper-division standing; twenty-four semester hours of coursework in communication sciences and disorders, twelve of which must be upper-division; and admission to the Communication Sciences and Disorders Honors Program.

**CSD 360M. Communication and Deaf People.**

Forms of face-to-face communication used with deaf people, including speech/listening, systems of manual communication, and natural sign language. Emphasis is on child development issues and the use of different methods in educational practice. Three lecture hours a week for one semester. Fulfills the communication and culture requirement in the College of Communication. Prerequisite: Upper-division standing, Communication Sciences and Disorders 308K with a grade of at least C, and a University grade point average of at least 2.25.

**CSD 367. Topics in Communication Sciences and Disorders.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**CSD 367C. Communication, Culture, and Disability.**

Through examination of historical trends, current law and practices, and family and ethical issues, explores how societies have interacted with people who are disabled. Emphasis placed on alternative methods of communication. Three lecture hours a week for one semester. Communication Sciences and Disorders 367 (Topic: Communication, Culture, and the Disabled) and 367C may not both be counted. Fulfills the communication and culture requirement. Prerequisite: Upper-division standing and a University grade point average of at least 2.25.

**CSD 367K. Introduction to Speech and Language Disorders Assessment and Treatment in Children.**

Restricted to senior communication sciences and disorders majors. Introduction to assessment procedures and treatment strategies for children with speech and language disorders. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and the following coursework with a grade of at least C in each course: Communication Sciences and Disorders 306K or 308K; 311K and 313L; 318K and 118L (or 368K and 168L); 358 and 358S (or 315S).

**CSD 167M. Clinical Practicum.**

Supervised clinical practicum in speech/language pathology, audiology, and education of the deaf. One lecture hour and two hours of clinical teaching a week for one semester. May not be counted toward a degree. Offered on the pass/fail basis only. Prerequisite: Communication Sciences and Disorders 367K, 371, or 378; and consent of instructor.

**CSD 367R. Clinical Research in Speech/Language Pathology.**

Three lecture hours a week for one semester. Communication Sciences and Disorders 367 (Topic 2: Clinical Research in Speech Language Pathology) and 367R may not both be counted. Prerequisite: Upper-division standing, Communication Sciences and Disorders 358S with a grade of at least C, and a University grade point average of at least 2.25.

**CSD 371. Introduction to Speech and Language Disorders Assessment and Treatment in Adults.**

Restricted to senior communication sciences and disorders majors. Introduction to assessment procedures and treatment strategies for adults with speech and language disorders. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a University grade point average of at least 2.25, and the following coursework with a grade of at least C in each course: Communication Sciences and Disorders 306K or 308K; 311K, 313L, and 350; and 358 and 358S (or 315S).

**CSD 373. Principles of Aural Rehabilitation.**

Rationale, methods, materials, procedures, and criteria for aural rehabilitation for hearing-impaired persons. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; the following coursework with a grade of at least C in each course: Communication Sciences and Disorders 306K or 308K; 311K and 313L; and 358 and 358S (or 315S); and a University grade point average of at least 2.25.

**CSD 175N. Deaf Education Seminar.**

Discussion of selected topics in social, political, and educational aspects of deafness. One lecture hour a week for one semester. Communication sciences and disorders majors specializing in education of the deaf/hearing-impaired may count no more than four semester hours in this course toward the degree; communication sciences and disorders majors specializing in audiology or specializing in speech/language pathology may count no more than two semester hours in this course toward the degree; other students with majors in the College of Communication may count no more than one semester hour in this course toward the degree. May be repeated for credit. Prerequisite: Upper-division standing.

### **CSD 378. Clinical Audiology.**

Differential diagnostic procedures for evaluation of auditory disorders--theoretical concepts and clinical applications. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Communication Sciences and Disorders 341.

### **CSD 178K, 378K. Studies in Communication Sciences and Disorders.**

Restricted to communication sciences and disorders majors. Supervised individual research. Individual instruction. With consent of the department chair, may be repeated, but only three hours may count toward a degree in the College of Communication. No more than three semester hours may be taken on the letter-grade basis. Prerequisite: Upper-division standing; eighteen semester hours of coursework in communication sciences and disorders, including at least six hours of upper-division coursework; a University grade point average of at least 2.50; a grade point average in all College of Communication coursework of at least 3.00; and approval of a project in advance of registration.

### **CSD 178L. Clinical Audiology Laboratory.**

Clinical laboratory experience in audiology. One lecture hour a week for one semester. Prerequisite: Upper-division standing.

### **CSD 379H. Honors Tutorial Course: Special Project.**

Restricted to senior communication sciences and disorders majors. The writing of a thesis or the presentation of a creative project; final comprehensive examination. Individual instruction. Prerequisite: Communication Sciences and Disorders 359H.

## **Department of Communication Studies**

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Communication Studies: CMS**

#### **Lower-Division Courses**

##### **CMS 301. Topics in Communication Studies.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

##### **CMS 306M (TCCN: SPCH 1321). Professional Communication Skills.**

Designed to help students develop skills in one-on-one interactions, small group communication, and presentation skills. Basic communication theories as they relate to skill development are explored. Three lecture hours a week for one semester.

##### **CMS 210. Forensics Workshop.**

Open to all University students. Training for participation in extracurricular speech activities, including intercollegiate debate. Two

lecture hours and eight laboratory hours a week for one semester. Communication Studies 210 may be taken three times for credit.

##### **CMS 310K (TCCN: SPCH 2333). Team-Based Communication.**

Analysis of small-group communication: cohesiveness, social climate, role structure, leadership, conformity, dynamics of interaction; participation in small-group communication situations. Three lecture hours a week for one semester.

##### **CMS 313M. Organizational Communication.**

Communication processes within government, private, and volunteer organizations. Three lecture hours a week for one semester.

##### **CMS 314L. Language, Communication, and Culture.**

The role of language in communication. Analysis of the complexity of human languages, languages in contact, language modality, and communication interaction. Three lecture hours a week for one semester.

##### **CMS 315M (TCCN: SPCH 1318). Interpersonal Communication Theory.**

Introduction to the study of communication in relationships; topics include self-disclosure, conflict, long-distance relationships, stereotyping, and persuasion. Three lecture hours a week for one semester.

##### **CMS 316L (TCCN: SPCH 2316). Interviewing Principles and Practices.**

Introduction to interviewing theory, emphasizing the acquisition and application of interviewing skills. Three lecture hours a week for one semester.

##### **CMS 317C. Speechmaking and Society.**

The impact of public discourse on the ideas and issues of culture and history in the United States. Three lecture hours a week for one semester.

##### **CMS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Communication Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the appropriate College of Communication department. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **Upper-Division Courses**

##### **CMS 320. Advanced Presentation Skills.**

Designed to help students develop skills in delivering informative and persuasive presentations and speeches. Study of major theories related to oral presentations. Focus on audience analysis and adaptation, building strong arguments, speech organization, and use of new technologies. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Studies 312C, 317M, 320, 367 (Topic: Advanced Presentation Skills). Prerequisite: Upper-division standing and Communication Studies 306M with a grade of at least C.



**CMS 322E. Communication Ethics.**

Examination of the ethical issues involved in communication. Subjects addressed include our role in interactions we are party to; media coverage of issues of a sensitive or potentially harmful nature; and how our interactions with others reflect and shape who we are. Three lecture hours a week for one semester. Communication Studies 322E and 367 (Topic 4: Communication Ethics) may not both be counted. Prerequisite: Upper-division standing.

**CMS 323R. Rhetoric: East and West.**

Examination of the ways people from different cultures communicate and argue, and how cultures use logic, stories, myth, images, and the spoken word to make their points. Three lecture hours a week for one semester. Communication Studies 323R and 367 (Topic: Rhetoric East and West) may not both be counted. Prerequisite: Upper-division standing.

**CMS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Communication Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Communication Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**CMS 330. Interpersonal Health Communication.**

The fundamental interpersonal communication processes that are involved in managing physical and mental health. Includes stigma and illness identity, social support, patient-provider communication, end-of-life care, and health education. Three lecture hours a week for one semester. Communication Studies 330 and 367 (Topic: Interpersonal Health Communication) may not both be counted. Prerequisite: Upper-division standing.

**CMS 331K. Speech Writing and Criticism.**

Composition and analysis of oral messages; emphasis on creating and arranging ideas, style, delivery, critical method. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Communication Studies 306M or the equivalent, or consent of instructor.

**CMS 332. Argumentation and Advocacy.**

Nature of argumentative controversy; variables of form, method, and ethics; analysis of argumentative rhetorical works. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 332K. Theories of Persuasion.**

A study of motivational factors involved in persuasive speaking to secure belief and action. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 333. Case Studies in Argumentation.**

Study of argumentation theories. Includes analysis of case studies taken from areas of law, public policy, popular culture, and history. Three lecture hours a week for one semester. Communication Studies 333 and 367 (Topic: Case Studies in Argumentation) may not both be counted. Prerequisite: Upper-division standing.

**CMS 334K. Nonverbal Communication.**

Survey of the effects of space, physical appearance, movement, eye behavior, and vocal behavior on interpersonal communication. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 335. Strategic Sales and Event Planning.**

Theory and practice related to the preparation of large-scale sales events and conferences. Designed to develop communication skills and planning techniques. May include client research, investigation of potential venues, telephone-based information interviews, individual or group sales presentations, and event overviews. Three lecture hours a week for one semester. Communication Studies 335 and 367 (Topic: Strategic Sales and Event Planning) may not both be counted. Prerequisite: Upper-division standing.

**CMS 336D. Career Dynamics and Corporate Communication.**

An exploration of work and career from an interdisciplinary perspective, employing a variety of definitions, cases, theories, strategies, and popular culture materials to address issues of employability, entrepreneurship, advancement, and objective/external and subjective/psychological success and their relationships with organizational life. Topics may include effects of technologies on work and careers, professionalism and professional identity, networks, teamwork, work-life balance, managing one's boss, and criteria for success. Three lecture hours a week for one semester. Communication Studies 336D and 367 (Topic: Career Dynamics and Corporate Communication) may not both be counted. Prerequisite: Upper-division standing.

**CMS 337. Building Sales Relationships.**

Explores the theoretical and practical role of communication in the development of long-term client relationships. Explores the consultative sales process, including prospecting, assessing needs, handling objections, presenting, closing, and following up with clients. Focuses on how technology can help or hinder communication. Three lecture hours a week for one semester. Communication Studies 337 and 367 (Topic: Communication to Build Sales Relationships) may not both be counted. Prerequisite: Upper-division standing.

**CMS 338. Leadership Stories.**

Uses fictional and nonfictional stories, as well as examples taken from virtual reality, to explore the meaning of leadership. Designed to help students develop a conceptual, practical, and personal understanding of the meaning of leadership. Three lecture hours a week for one semester. Communication Studies 338 and 367 (Topic: Stories of Leadership) may not both be counted. Prerequisite: Upper-division standing.

**CMS 339L. Social Interaction in Virtual Environments.**

Examines fundamental principles connected to the uses and effects of new technologies. Covers social networking sites, online dating, virtual group collaboration, and video games. Three lecture hours a week for one semester. Communication Studies 339L and Communication Studies 367 (Topic: Social Interaction in Virtual Environments) may not both be counted. Prerequisite: Upper-division standing.

**CMS 340K. Communication and Social Change.**

Analysis of how persuasion is used in mass movements: civil rights, consumerism, feminism, pacifism, religious sects. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 341. Computer-Mediated Communication.**

Uses principles related to communication and social psychology to explore online interactions. May include the study of impression formation and management, group communication, trust and deception, Internet dating, online video gaming, social support, Internet addiction, and impacts of new communication technology. Three lecture hours a week for one semester. Communication Studies 341 and 367 (Topic: Computer-Mediated Communication) may not both be counted. Prerequisite: Upper-division standing.

**CMS 342K. Political Communication.**

A study of the role of symbols in political communication and the techniques and strategies employed by politicians; special attention is given to recent election campaigns. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 344K. Lying and Deception.**

Examines lying and deception as civil, strategic, and manipulative behavior. Secrets, privacy, disclosures, and confidentiality are examined in a variety of familiar contexts. Three lecture hours a week for one semester. Communication Studies 344K and 367 (Topic: Lying and Deception) may not both be counted. Prerequisite: Upper-division standing.

**CMS 345. Media Effects and Politics.**

The theoretical models and research methods used to study media effects. Emphasis on the political implications of media-effects research and on how media-effects theories can help clarify political issues. May include television violence, the political impact of the news, and the use of media for educational purposes. Three lecture hours a week for one semester. Communication Studies 345 and 367 (Topic: Media Effects and Politics) may not both be counted. Prerequisite: Upper-division standing.

**CMS 345K. Perspectives on Rhetoric.**

Four different meanings of rhetoric; how these meanings contribute to the current understanding of communication studies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 346. Using Communication Technology at Work.**

Examines how communication technologies affect workplace communication. Considers case studies involving the use of social networking, handheld devices, and e-mail by for-profit and nonprofit organizations. Three lecture hours a week for one semester. Communication Studies 346 and 367 (Topic: Using Communication Technology at Work) may not both be counted. Prerequisite: Upper-division standing.

**CMS 347K. Rhetoric of Popular Culture.**

The ways that film, television, music, fashion, the Internet, and other discourses of popular culture influence public attitudes, perceptions, and social relations. Three lecture hours a week for one semester. Communication Studies 347K and 367 (Topic: Rhetoric of Popular Culture) may not both be counted. Prerequisite: Upper-division standing.

**CMS 348. Communication Research Methods.**

A practical introduction to research methods, focusing on designing a study, conducting research, analyzing data, and presenting results. Studies survey design, interviews, focus groups, and experiments. Three lecture hours a week for one semester. Communication Studies

348 and 367 (Topic: Communication Research Methods) may not both be counted. Prerequisite: Upper-division standing.

**CMS 348K. Visual Media and Interaction.**

The role of visual resources and symbols in social interaction and public life; the representation of interaction and human relationships in visual media (photography, advertising, fine arts, and film). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 349M. Advanced Analysis of Popular Culture.**

Advanced critique and analysis of rhetorical dimensions in texts of popular culture. Readings in theory and methods for understanding persuasive influence in television, film, music videos, and the Internet. Web-based instruction; no class meetings. Prerequisite: Upper-division standing, and Advertising 303, Communication Studies 347K, or Radio-Television-Film 305.

**CMS 350M. Field Study in Organizational Communication.**

Students acquire information through interviews and observation, devise appropriate coding schemes, and compose synoptic reports of their findings and recommendations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 351. Communication for Cooperation and Competition.**

Theoretical perspectives and experiential learning on the ways people reconcile the need to be individualistic (competitive) with the need to be community members (cooperative). Individual aggression and submission; the rewards of competition and cooperation; and organizational structures that lead to cooperation and competition. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 354. Conflict Resolution.**

Systematic analysis of conflict and communication to examine some of the effects of communication on conflict and of conflict on communication. Readings, analysis of conflicts, and practice with and evaluation of communication behaviors thought to be effective in conflict talk. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 355K. Intercultural Communication.**

Theories of speech and language that concern interaction between persons from different cultures who speak different languages or dialects. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 357. Family Communication.**

Some of the common issues that face those who live in, counsel, and conduct research with families. The development of traditional families in the United States, different family structures that make up modern society, current issues that affect families, and the impact of communication on family experiences. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**CMS 358. Communication and Personal Relationships.**

The nature of human interaction in various types of relationships (friends, dates, spouses, roommates), the nature of communication at different stages in a relationship, and the nature of communication at different life stages. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **CMS 359. Language, Culture, and Communication of Hip-Hop.**

Uses hip-hop music as a model for understanding a speech community. Focuses on language innovation and the creation of new social networks, forms of communication, and cultural meaning and values. Three lecture hours a week for one semester. Communication Studies 359 and 367 (Topic: Language, Culture, and Communication in the Hip-Hop Nation) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 359H. Honors Tutorial Course: Reading.**

Intensive reading and research as planned by the departmental honors committee. Individual instruction. Prerequisite: Upper-division standing and admission to the Communication Studies Honors Program.

### **CMS 360. Analyzing Social Interaction.**

Introduction to concepts and research methods related to the study of how verbal and nonverbal communication is used in everyday situations. Includes collecting and analyzing sound and video data. Designed to help students develop skills in interpreting human social interactions. Three lecture hours a week for one semester. Communication Studies 360 and 367 (Topic: Language and the Body in Social Interaction) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 364K. Gender and Communication.**

Focuses on how communication influences ideas about sex, gender, and identity, from interpersonal relationships to the mass media, and from legislative debates to social movements. Three lecture hours a week for one semester. Communication Studies 364K and 367 (Topic: Gender and Communication) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 164M, 264M, 364M. Communication Studies Mentorship.**

Directed study of one or more areas of an academic discipline. Individual instruction. With consent of the department chair, may be repeated for credit, but no more than three hours may be taken. Prerequisite: Upper-division standing.

### **CMS 365K. Male-Female Communication.**

Same as Women's and Gender Studies 345 (Topic 21: Male-Female Communication). Studies of speech patterns related to the concepts of male and female, including sexism in speaking, patterns of male and female speaking, patterns of listening to males and females, speech in courtship and family, speech and sexual discrimination in careers. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **CMS 365L. Communication, Controversy, and Citizenship.**

Designed to help students develop the listening, speaking, and argumentation skills used to deliberate over controversial and sensitive subjects. Deliberations focus primarily on the meaning of citizenship. Three lecture hours a week for one semester. Communication Studies 365L and 367 (Topic: Communication, Controversy, and Citizenship) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 366. Rhetoric, Love, and Democracy.**

Covers ideas about human symbolism and discourse; focuses on the effects of rhetorical perspectives on how people make meaning of the world. Three lecture hours a week for one semester. Communication

Studies 366 and 367 (Topic: Love, Democracy, and Rhetoric) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 366C. Celebrity Culture.**

Examines the importance of fame and celebrity throughout the nineteenth, twentieth, and twenty-first centuries, in relation to education, entertainment, and politics. Three lecture hours a week for one semester. Communication Studies 366C and 367 (Topic: Celebrity Culture) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 366F. Rhetoric of Film.**

Film theory and history taught from a rhetorical perspective. Covers the film industry, technology, and the elements of narrative, image, and sound. Emphasis on theory about film and film criticism. Three lecture hours a week for one semester. Communication Studies 366F and 367 (Topic: Rhetoric of Film) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 366M. Rhetoric and Popular Music.**

Explores music and its relation to identity; how gender, race, and sexual identity are constructed with and within musical texts; meanings and importance of authenticity; and the effectiveness of music as a political tool. Three lecture hours a week for one semester. Communication Studies 366M and 367 (Topic: Rhetoric and Popular Music) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 366R. Rhetoric and Religion.**

Explores secular and religious instances of ambivalence, and its uses and effects. Three lecture hours a week for one semester. Communication Studies 366R and 367 (Topic: Rhetoric and Religion) may not both be counted. Prerequisite: Upper-division standing.

### **CMS 367. Topics in Communication Studies.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

#### **Topic 1: Applied Interpersonal Communication.**

#### **Topic 2: Campaign Communication.**

**Topic 3: Communication and Thought.** Investigates the emergence of collaborative thought from human communication.

**Topic 5: Ethnography of Live Music in Austin.** Explores music and musicians in Austin, with a focus on ethnographic research through observation, interviews, analysis, and writing.

**Topic 6: Pragmatism and Group Dynamics.** Explores how individual beliefs and expectations determine the quality of group communication.

### **CMS 369V. Political Research.**

Students conduct research with Project Vote Smart, a nonpartisan, nonprofit political research organization. Offered on the pass/fail basis only. Prerequisite: Students must apply by sending a cover letter and resume to [projectvotesmart@austin.utexas.edu](mailto:projectvotesmart@austin.utexas.edu).

### **CMS 370K. Internship in Communication Studies.**

Restricted to senior communication studies majors. Focuses on career goals of students through classroom discussions and places students in communication positions with public and private organizations. The equivalent of three lecture hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Twelve semester hours of communication studies (or speech), including at least three hours of

upper-division coursework; a University grade point average of at least 2.50; a grade point average in communication studies of at least 3.00; and consent of instructor.

#### **CMS 371K. Practicum in Conflict Mediation.**

Two lecture hours and three discussion hours a week for one semester. Students must also attend one weekend workshop at the beginning of the semester. With consent of instructor, may be repeated once for credit. Offered on the pass/fail basis only.

#### **CMS 171M. Communication Studies Internship.**

Internship and discussion hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Communication Studies 370K; consent of departmental internship coordinator; and completion of departmental requirements for enrollment in an internship course.

#### **CMS 372K. Advanced Organizational Communication.**

In-depth discussion and treatment of advanced organizational communication topics, including socialization and role development, workplace attachments, organizational culture, ethics, structure, conflict, power, decision making and empowerment, technology, and various forms of external communication with relevant organizational stakeholders. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Communication Studies 313M.

#### **CMS 373D. Advocacy in Applied Settings.**

An introduction to the issues faced when advocating for an issue, idea, or one's self. The course aims to have students grasp concepts they will see and experience during their internship in Washington, DC. Eight conference hours a day for six days, for the equivalent of three lecture hours a week for one semester. Taught in Washington, DC. Prerequisite: Consent of the department.

#### **CMS 374D. Beyond Congress and the White House.**

Explores issues of power in our nation's capital. Students study Washington, DC via visits to sites around the city. One three-hour field trip a week for one semester. Taught in Washington, DC. Prerequisite: Consent of the department.

#### **CMS 177K, 377K, 477K. Faculty-Initiated Research.**

Supervised research on a project designed by a faculty member. Individual instruction. No more than six semester hours in the following courses may be counted: Communication Studies 177K, 377K, 477K, 178K, 278K, 378K, 478K, 578K, 678K. Prerequisite: Upper-division standing, twelve semester hours of coursework in communication studies, a University grade point average of at least 2.50, and consent of instructor and the department.

#### **CMS 178K, 278K, 378K, 478K, 578K, 678K. Student-Initiated Research.**

Supervised independent research on a project initiated, designed, and implemented by the student. Student secures consent of a faculty member willing to supervise the project prior to registering. Individual instruction. No more than six semester hours in the following courses may be counted: Communication Studies 177K, 377K, 477K, 178K, 278K, 378K, 478K, 578K, 678K. Prerequisite: Upper-division standing, twelve semester hours of coursework in communication studies, a University grade point average of at least 2.50, and consent of instructor and the department; Communication Studies 177K, 377K, 477K is recommended.

#### **CMS 379H. Honors Tutorial Course: Special Project.**

The writing of a thesis or the presentation of a creative project; final comprehensive examination. Individual instruction. Prerequisite: Communication Studies 359H.

## **School of Journalism**

Journalism majors may not register for more than nine semester hours in journalism in one semester or summer session. The director or associate director may make exceptions to this rule for seniors who need additional journalism courses in order to graduate on time.

Any student enrolled in a journalism course who does not attend the first class meeting or laboratory session may be dropped from that course.

In addition to the prerequisites given below, several policies described in this catalog and specifically those listed in the section Special Requirements (p. 79) affect registration in journalism courses.

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Journalism: J**

#### **Lower-Division Courses**

##### **J 301F. Fundamental Issues in Journalism.**

Examination of major issues facing the news media in a democratic society and the exploration of digital technology on the future of news gathering, including ethics, institutions, effects, and standards of journalistic performance. Three lecture hours a week for one semester. Journalism 301F and 310 may not both be counted.

##### **J 302F. Digital Storytelling Basics.**

Restricted to journalism majors. Introduction to multiple technologies for digital delivery of text, photos, audio, and video news across journalism platforms. Includes a module on grammar, spelling, and punctuation. Students must pass the grammar, spelling, and punctuation module to pass the course. Three lecture hours and three laboratory hours a week for one semester. Journalism 302F and 315 may not both be counted.

##### **J 303F. Graphic Design for Online and Print.**

Overview, design, and production of materials for online and print storytelling. Subjects include design principles, visual perception, typography, manipulation of images and photographs, and page design for media platforms. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 303F, 319, 336.

##### **J 310F. Reporting: Words.**

Restricted to journalism majors. Reporting, writing, and editing skills for print, online, and broadcast. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 310F, 320D, 322D. Offered on the letter-grade



basis only. Prerequisite: Journalism 301F (or 310) and 302F (or 315) with a grade of at least C in each.

### **J 310K. Visual Literacy.**

Introduction to the visual concerns of message design and interpretation, including their bases in theories of visual perception, semiotics, and media practice. Three lecture hours a week for one semester.

### **J 311F. Reporting: Images.**

Restricted to journalism majors. Photography, video, and design for print, web, and broadcast, including design principles, visual perception, typography, manipulation of images, and photographs. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 311F, 318C, 321C. Offered on the letter-grade basis only. Prerequisite: Journalism 301F (or 310) and 302F (or 315) with a grade of at least C in each.

### **J 313S. Topics in Texas Sports and Media.**

Introduction to various contemporary and historical issues, emphasizing interdisciplinary perspectives and critical discourse. Three lecture hours a week for one semester. Communication 310 and Journalism 313S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **J 318. Photography I.**

Intensive training in basic digital and black-and-white photography; darkroom techniques; and fundamental approaches to producing images. Three lecture hours and four laboratory hours a week for one semester. Journalism 318 and 325 may not both be counted. Prerequisite: Journalism 316 with grade of at least C, and a major in journalism or consent of instructor.

### **J 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Journalism.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Journalism. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **J 320F. Covering Law Enforcement and Courts.**

Restricted to journalism majors. Specialized reporting, research, and writing skills for investigating and covering incidents and issues occurring in law enforcement, public safety, and criminal justice. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 321F. Reporting on City and County Government.**

Restricted to journalism majors. Basic beat reporting skills to navigate city and county governments, and conducting reporting, research, and writing on issues and people at the local level. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 322D. Broadcast Newswriting and Radio Reporting.**

Examination and practice of writing news for broadcast and of basic broadcast reporting skills. Students write, report, edit, and produce a radio news program on deadline. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Admission to the broadcast news area of concentration.

### **J 322F. Navigating State Government.**

Restricted to journalism majors. Training and instruction in specialized reporting, research, and writing skills as applicable to covering state governments. Analysis of enduring issues and politics at the state level. Fieldwork at the Texas Capitol and state agencies. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 323F. Education Reporting.**

Restricted to journalism majors. Covering school districts and higher education to produce stories that humanize the bureaucracy of public education and compellingly depict issues, structures, and policies. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 324F. Business and Financial Reporting.**

Instruction in how to conceptualize, source, and prepare news reports on global financial markets, commercial transactions, and company performance. The course is global, with the United States a subset of the material covered. Hands-on course during which students produce multiple news packages for publication. Three lecture hours a week for one semester. Journalism 324F and 349T (Topic 2: Business Journalism) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 325F. Covering Politics.**

Restricted to journalism majors. Specialized research, reporting, and writing skills to cover political issues, candidates, and campaigns. Three lecture hours a week for one semester. Journalism 325F and 349T (Topic 16: Politics and the Press) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 326F. Reporting Sports.**

Restricted to journalism majors. Contemporary professional skills and techniques in sports journalism. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 326S. Advanced Topics in Texas Sports and Media.**

Critical assessment of various contemporary and historical issues, emphasizing interdisciplinary perspectives. Three lecture hours a week for one semester. Communication 320 and Journalism 326S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Completion of at least sixty semester hours of coursework and a University grade point average of at least 2.25.

### **J 327. Feature Writing.**

Practice in researching, reporting, writing, structuring, and editing feature stories and news features for the print media. Identifying and contacting appropriate freelance markets regarding queries and stories. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 327, Latin American Studies 322 (Topic 4: Feature Writing), Mexican American Studies 374 (Topic 6:

Feature Writing). Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.

### **J 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Journalism.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Journalism. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **J 330F. Television Reporting and Producing.**

Restricted to journalism majors. Basic television news gathering skills, including shooting and editing videotape, planning and executing visual storytelling, and writing and producing news packages. Students assist in the production of a television news program. Two lecture hours and four laboratory hours a week for one semester. Journalism 330F and 353D may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each, and consent of instructor.

### **J 330G. Creative Nonfiction for Magazines and Books.**

Restricted to journalism majors. Reporting and writing skills for narrative nonfiction, including writing book proposals, magazine pitches, and sample chapters. Three lecture hours a week for one semester. Journalism 330G and 359T (Topic 6: Narrative Storytelling) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 331. Web Publishing.**

Advanced skills in Web design and in publishing multimedia content. Emphasis on collaborative work in creating an ongoing Web information product. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Journalism 320D and 321C with a grade of at least C in each, and admission to a journalism area of concentration.

### **J 331F. Entrepreneurial Journalism.**

Restricted to journalism majors. Creating for-profit and nonprofit journalistic enterprises in the news media ecosystem; the impact of digital technology on the news industry, with emphasis on changes to business and distribution models, and ways people consume and produce news and information; and projects and prototypes that include business plans and content planning. Three lecture hours a week for one semester. Journalism 331F and 359T (Topic: Entrepreneurial Journalism) may not both be counted. Prerequisite: Journalism 310F (or 320D) and 311F (or 321C) with a grade of at least B in each.

### **J 331G. Audio Storytelling.**

Restricted to journalism majors. Examination and practice of writing news for podcast. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 322D, 331G, 359T (Topic 7: Podcasting). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 332F. News Editing for Online and Print.**

Restricted to journalism majors. Advanced multimedia editing and production techniques. Emphasis on news judgment, language use, editing of textual elements, and use of digital software for print and web publication of text, audio, and visual imagery. Three lecture hours and three laboratory hours a week for one semester. Journalism 332F

and 330 may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 332G. Explanatory Journalism: Storytelling in a Digital Age.**

Restricted to journalism majors. Examination of the evolution of long-form explanatory storytelling from print and film to new forms of Web-based and interactive storytelling. Three lecture hours a week for one semester. Journalism 332G and 359T (Topic: Explanatory Journalism: Storytelling in a Digital Age) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 333F. Data-Driven Reporting.**

Restricted to journalism majors. Electronic document retrieval and manipulation; spreadsheet and database management; and Internet skills. Includes collaborative work on major investigative projects. Three lecture hours a week for one semester. Journalism 333F and 338 may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 333G. Advanced Visual Journalism: Photo.**

Restricted to journalism majors. Explores intensive photographic reportage and documentation using the camera as a tool of investigation and interaction. Emphasis on creation of photo stories, photo essays, and feature stories, with editing and page layout. Three lecture hours and three laboratory hours a week for one semester. Journalism 333G and 355 may not both be counted. Prerequisite: Communication 316 or Journalism 316 with a grade of at least C; and Journalism 310F and 311F with a grade of at least B in each.

### **J 334. Multimedia Journalism.**

Review of online reporting techniques, advanced multimedia skills, and current issues in new media. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Journalism 320D and 321C with a grade of at least C in each, and admission to a journalism area of concentration.

### **J 334F. Oral History as Journalism.**

Restricted to journalism majors. Instruction in the use of oral history to generate journalistic coverage. Modules include concepts and methods of gathering oral history; illustration of the techniques using the Vietnam War as a topic; and generating oral history-based coverage focusing on the Mexican American experience. Three lectures hours a week for one semester. Only one of the following may be counted: Journalism 334F, 349T (Topic 7: Oral History as Journalism), 395 (Topic 20: Oral History as Journalism). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 334G. Advanced Visual Journalism: Video.**

Restricted to journalism majors. Explores intensive video reportage and documentation using the camera as a tool of investigation and interaction. Emphasis on creation of video news and feature stories. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 334G, 370K, 371K. Prerequisite: Communication 316 or Journalism 316 with a grade of at least C; and Journalism 310F and 311F with a grade of at least B in each.

### **J 335. Narrative Journalism.**

Students develop and produce a publication, focusing particularly on underrepresented groups and issues. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335, Latin American Studies

322 (Topic 11: Latino Community Journalism), 322 (Topic 11: Narrative Journalism), Mexican American Studies 374 (Topic 4: Latino Community Journalism), 374 (Topic 4: Narrative Journalism). Prerequisite: Journalism 320D with a grade of at least C, admission to a journalism area of concentration, and consent of instructor.

### **J 335F. Magazine Writing and Production.**

Restricted to journalism majors. Instruction in and supervised practice of magazine writing and production. Laboratory hours include production of a magazine online and in print. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335F, 349T (Topic 15: Magazine Production), 359T (Topic 2: Magazine Production). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 335G. Advanced Television Reporting and Producing.**

Restricted to journalism majors. Advanced writing and reporting skills for the collaborative production of television news programs on deadline. Students assist in producing a television news program. Two lecture hours and four laboratory hours a week for one semester. Journalism 335G and 372D may not both be counted. Prerequisite: Journalism 330F (or 353D) with a grade of at least C; Journalism 310F and 311F with a grade of at least B in each; and consent of instructor.

### **J 336F. Social Media Journalism.**

Restricted to journalism majors. The role of journalism in emerging digital social networks, examining current and traditional theories about social media as a form of journalism. Practice in the use of live chatting, tagging, geotagging, wikis, Twitter, Flickr, and digital avatars as news-gathering techniques. Three lecture hours a week for one semester. Journalism 336F and 349T (Topic: Social Media Journalism) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 336G. Producing Social Documentaries for Television News.**

Restricted to journalism majors. Instruction in the production of social documentaries for television, with emphasis on social issues often ignored by television news. Includes production of a twenty-minute long-form story. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each; Journalism 331G or 359T (Topic 7: Podcasting) with a grade of at least C; and consent of instructor.

### **J 337F. Long-Form Feature Writing.**

Restricted to journalism majors. Advanced instruction in reporting and writing long-form narratives, including lessons in analyzing story-telling tools, strategies, and techniques. Examination of narrative strategies and techniques across different media platforms. Three lecture hours a week for one semester. Journalism 337F and 374D may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 337G. Opinion Writing.**

Restricted to journalism majors. Examines opinion writing and commentary in traditional print and evolving online formats. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 338F. Advanced Visual Design.**

Restricted to journalism majors. Advanced exploration of principles and processes of visual design, including design principles, visual perception, typography, image making, uses of color, printing

techniques, and publication design. Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 338F, 359T (Topic 3: Advanced Visual Design), 395 (Topic 5: Advanced Visual Design). Prerequisite: Journalism 303F (or 319) with a grade of at least C, and Journalism 310F (or 320D) and 311F (or 321C) with a grade of at least B in each.

### **J 339D. News Documentaries and Public Affairs.**

Study and practice of researching, writing, and producing short-form and magazine documentaries for television. Three lecture hours a week for one semester. Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.

### **J 339F. Investigative Reporting.**

Restricted to journalism majors. Emphasis on determining what an investigative story is, finding investigative stories, and basic tactics in pursuing such stories. Three lecture hours and three laboratory hours a week for a semester. Journalism 339F and 359T (Topic 5: Investigative Reporting) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 339S. Research in Texas Sports and Media.**

Same as Communication 330. Supervised research with a faculty member; research may consist of an individual project or assisting a faculty research project. Hours to be arranged. May be repeated for credit. Prerequisite: Completion of at least sixty semester hours of coursework, a University grade point average of at least 2.25, and consent of the department.

### **J 340C. Topics in Journalism, Communication, and Culture.**

Issues concerning minority or nondominant groups within the United States. Three lecture hours a week for one semester. Some topics may require additional laboratory hours. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 4: Leadership, Management, and the Media.** Prerequisite: Admission to a journalism area of concentration.

### **J 340F. Covering the Global Economy.**

Restricted to journalism majors. Examines the enduring financial, economic, and business issues journalists confront in covering the global economy. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 340G. Reporting Asia: A Foreign Correspondent's Framework.**

Restricted to journalism majors. Explores dynamic ways of looking at, thinking about, and reporting the world, and establishes a framework for analyzing how the news media cover key events, issues, and processes that shape our lives in a global society. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 340G, 349T (Topic 17: Reporting Asia), 395 (Topic 17: Reporting Asia). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 340J. Documentary Tradition of Latin America.**

Contemporary social, professional, and intellectual concerns with the practice of journalism. Study of still photographic and video documentary work by Latin Americans about Latin America. Production of photographic essays on Latin American culture. Three lecture

hours a week for one semester. Only one of the following may be counted: Journalism 340J, 349T (Topic: Documentary Tradition in Latin America), 395 (Topic 4: Documentary Tradition of Latin America). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 341F. Understanding African Americans and the Media.**

Restricted to journalism majors. Examination of documentaries and films, readings and discussions, writing and research assignments, and group projects to increase understanding of the historical context of African Americans in United States society. Focuses on evaluating media representation and coverage of African Americans. Three lecture hours a week for one semester. Journalism 341F and 340C (Topic 2: African Americans and the Media) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 341G. Reporting China: A Foreign Correspondent's Workshop.**

Restricted to journalism majors. Contemporary social, professional, and intellectual concerns with the practice of journalism. Three lecture hours a week for one semester. Journalism 341G and 349T (Topic 18: Reporting China) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 341J. Minorities and the Media.**

Issues concerning minority or nondominant groups in the United States. Survey of minority communication problems, including alienation, fragmentation, and media and Internet access. Criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 340C (Topic 1: Mass Media and Minorities), 341J, Latin American Studies 322 (Topic 10: Minorities and the Media), Mexican American Studies 374 (Topic 22: Minorities and the Media), Urban Studies 354 (Topic: Mass Media and Minorities), Women's and Gender Studies 340 (Topic 21: Minorities and the Media).

#### **J 342F. Women and the News.**

Restricted to journalism majors. Historical and contemporary exploration of women and the news. Examination of the role of women in producing news and the construction of women within news texts. Three lecture hours a week for one semester. Journalism 340C (Topic 5: Women and the News) and 342F may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 342G. Reporting the World: A Critical Examination of the United States News Media.**

Restricted to journalism majors. Dynamic ways of looking at, thinking about, and reporting the world, both abroad and at home. Establishes a framework for analyzing how the news media cover key events, issues, and processes that shape our lives in a global society. Three lecture hours a week for one semester. Journalism 342G and 349T (Topic 19: Reporting the World) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 343F. Journalism and Religion.**

Restricted to journalism majors. Critical examination of how religion traditionally has been covered in the United States, and guidelines for developing individual thinking and reporting on religious issues. Three lecture hours a week for one semester. Journalism 340C (Topic

3: Journalism and Religion) and 343F may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 343G. Exploring Digital Media and Society.**

Restricted to journalism majors. Examines the connection between new media and society through a variety of theoretical and practical perspectives to explore the implications of the use of technology and new media in influencing community, social relationships, and public and private spaces, as well as the profession of journalism. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 344F. Reporting on Gender and Sexuality.**

Restricted to journalism majors. Instruction on how to cover controversial issues around gender and sexuality. Review of the sociology of gender and sexuality, with a focus on political, economic, and cultural implications. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 344G. Urban Journalism.**

Studies of basic city functions and how to detect urban dysfunctions before crises become news. Topics include infrastructure decay, traffic congestion, poverty and homelessness, digital divides, school dropouts, conflict and crime, riots and protests, obesity and disease, recreation, and pollution. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 345F. Social Issues Reporting.**

Coverage of social issues such as immigration, health care, and child welfare. Examination of stereotypes, how they affect reporting, and how they change as student reporters encounter new subjects. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 345G. Human Rights Journalism.**

Exploration of the role of journalists in exposing human rights abuses. Modules include case studies from El Salvador, South Africa, Zimbabwe, Rwanda, Bosnia, Sudan, Israel, and Russia, as well as the legal and moral obligations of journalists as witnesses to atrocities and genocide. Examination of the Bush Administration's global War on Terror and the legacy confronting the Obama Presidency. Three lecture hours a week for one semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 346F. Reporting on the Environment.**

Instruction and supervised fieldwork in environmental coverage. Topics include interviewing, elements and structures of good environment writing, the concepts of scientific certainty and uncertainty, and communicating complex science to lay audiences. Issues covered include climate change, energy, air and water quality, and sustainability. Three lecture hours a week for one semester. Journalism 346F and 349T (Environmental Journalism) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

#### **J 346G. Domestic Issues and Global Perspective.**

Comparative reporting and covering social issues from global and intercultural perspectives. Proper positioning of the United States globally in terms of recession, food, health care, education, energy consumption, and climate change. Three lecture hours a week for one



semester. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 347F. Reporting Latin America.**

Foreign reporting and international news production processes, with special emphasis on Latin America. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 347F, 349T (Topic 4: International Reporting), 395 (Topic 4: Documentary Tradition of Latin America). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 347G. Cultural Survey of Photography.**

Development of photojournalism and commercial, documentary, amateur, and art photography, including historical processes, the evolution of stylistic trends, and the careers of major photographers. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 347G, 362E, 387P. Prerequisite: Journalism 310F and 311F with a grade of at least B in each; and Communication 316 or Journalism 316 with a grade of at least C.

### **J 347S. Magazine Management.**

Study of the business of launching and maintaining successful publications. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Journalism 320D and 327 with a grade of at least C in each, and admission to a journalism area of concentration.

### **J 348F. Covering the Latino Community in the United States.**

Challenging and developing views of the contemporary Latino community and other underrepresented people in the United States. Topics include a history of ethnic groups in the United States and their politics, education, organization, immigration, culture, power, and media. Three lecture hours a week for one semester. Journalism 348F and 349T (Topic 10: Covering the Latin Community in the United States) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 348G. The Business of Sports Media.**

Examination of the business of sports-related media, including over-the-air television, cable, satellite television, print, radio, social media, and internet-based media, and the impact of such media on sports presentation and development, professional franchises, colleges, and conferences. Emphasis on how the business of sports media generates revenue and content, and the business models for each type of media, the challenges to such models, and the likely future changes to them. Three lecture hours a week for one semester. Journalism 348G and 349T (Topic: The Business of Sports Media) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 348S. Media Management.**

Print and broadcast management and planning in operations, personnel, content, marketing, finance, technology, and regulation. Three lecture hours a week for one semester. Prerequisite: Admission to a journalism area of concentration.

### **J 349F. Reporting Public Health and Science.**

Restricted to journalism majors. Specialty reporting to help news consumers understand complex health and medicine issues. Considers the lack of critical perspective, balanced reporting, and grasp of fundamental issues that afflict much health reporting. Focuses on the latest reporting techniques and narrative skills to illuminate an intellectually demanding field that also includes public health policy.

Three lecture hours a week for one semester. Journalism 349F and 349T (Topic: Reporting Public Health and Science) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 349G. Sports Journalism.**

Restricted to journalism majors. Contemporary professional skills and techniques in covering sports and athletics, including interviewing coaches and athletes, reporting, the business side of sports, ethical issues for sports journalists, and writing sidebars and color stories. Three lecture hours and three laboratory hours a week for one semester. Journalism 349G and 359T (Topic 1: Sports Journalism) may not both be counted. Prerequisite: Journalism 310F (or 320D) and 311F (or 321C) with a grade of at least B in each.

### **J 349T. Topics in Journalism.**

Contemporary social, professional, and intellectual concerns in the practice of journalism. Three lecture hours a week for one semester. Some topics may require additional laboratory hours. May be repeated for credit when the topics vary. Prerequisite: Admission to a journalism area of concentration.

**Topic 1: Senior Seminar.** Capstone experience in analysis of current journalism issues. Students complete a major research project. Additional prerequisite: Consent of instructor.

**Topic 5: Broadcast News Practices and Analysis.**

**Topic 8: Alternative Media.** Journalism 349T (Topic 8) and 395 (Topic 22: Alternative Media) may not both be counted.

**Topic 9: Covering Technology and Innovation.**

**Topic 11: Editorial Column Writing.**

**Topic 14: Latino Policy Issues.**

**Topic 20: Video Journalism for the Web.**

**Topic 21: Writing for Magazines and Specialty Publications.**

**Topic 22: Writing for Online Publications.**

### **J 350F. Media Law.**

Required for all journalism majors. Examination of legal rights and restrictions for online and print journalism, including Constitutional guarantees, libel, invasion of privacy, and contempt of court. Three lecture hours a week for one semester. Journalism 350F and 360 may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 351F. Journalism, Society, and the Citizen Journalist.**

Restricted to journalism majors. Social and ethical responsibilities; and legal rights and restrictions, including Constitutional guarantees, libel, invasion of privacy, and contempt of court. Three lecture hours a week for one semester. Journalism 351F and 349T (Topic 13: Journalism, Society, and the Citizen Journalist) may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 352F. Ethics in Journalism.**

Restricted to journalism majors. In-depth examination of the ethical choices individual journalists face and the ethical implications of how news media operate in a larger social and political framework. Three lecture hours a week for one semester. Only one of the following may be counted: Journalism 352F, 349T (Topic 12: Ethics in Journalism), 395 (Topic 23: Ethics in Journalism). Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 353F. Historical Perspectives in Journalism.**

Restricted to journalism majors. Evolution of journalism and mass media, including the social, economic, and political factors that have contributed to changes in news gathering and distribution. Three lecture hours a week for one semester. Journalism 353F and 366E may not both be counted. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 359T. Topics in Journalism, Skills, and Techniques.**

Contemporary professional skills and techniques in the practices of journalism. Three lecture hours and two to four laboratory hours a week for one semester, as required by the topic. May be repeated for credit when the topics vary. Prerequisite: Admission to a journalism area of concentration.

#### **Topic 4: Advanced News Editing.**

### **J 360F. Internship.**

Restricted to journalism majors. Internships to be arranged by student and approved by instructor. Internship hours to be arranged. Journalism 331K and 360F may not both be counted. Offered on the pass/fail basis only. Prerequisite: Journalism 310F and 311F with a grade of at least B in each.

### **J 160G. Journalism Practicum.**

Restricted to journalism majors. Internship hours to be arranged. Journalism 131P and 160G may not both be counted. Offered on the pass/fail basis only. Prerequisite: Journalism 360F.

### **J 361F. Reporting Texas.**

Restricted to journalism majors. Students work as online reporters, photographers, and editors for the School of Journalism's Reporting Texas website. Three lecture hours and three laboratory hours a week for one semester. Journalism 361F and 359T (Topic: Reporting Texas) may not both be counted. Prerequisite: Six semester hours of upper-division coursework in journalism with a grade of at least B in each course.

### **J 363. Theories of Mass Communication.**

Comparative survey of perspectives, research, and theories on communication through the mass media; theories on media effects and the construction of social reality, especially regarding the news media. Three lecture hours a week for one semester.

### **J 364E. The Mass Media and Society.**

Readings, lectures, films, guest speakers, and panel discussions on the function, role, and responsibility of the mass media in modern society. Three lecture hours a week for one semester. Prerequisite: Admission to a journalism area of concentration, or consent of instructor.

### **J 367E. Journalism in Latin America.**

Same as Latin American Studies 322 (Topic 14: Journalism in Latin America). Study of the practice of journalism in Latin America. Survey of the region, including historical, political, economic, cultural, ethnic, and geographical aspects. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and a major in journalism, or consent of instructor.

### **J 370K. Advanced Photojournalism.**

Explores intensive photographic reportage and documentation using the camera as a tool of investigation and interaction. Emphasis on creation of photo stories, photo essays, and feature stories, with

editing and page layout. Three lecture hours and four laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Journalism 355 with a grade of at least C, and acceptance into the photojournalism area of concentration; or consent of instructor.

**Topic 1: Advanced Photo Editing and Design.** Taught abroad; location may vary by semester. Only one of the following may be counted: Journalism 370K (Topic 1), 370K (Topic: Advanced Photojournalism in Czechoslovakia), 395 (Topic 2: Advanced Photo Editing and Design).

**Topic 2: Documentary Video.**

**Topic 3: Picture Editing.**

### **J 371K. Photographic Illustration.**

Principles of studio lighting, theory and practice of contemporary color, location lighting, and the production of portfolio-quality work, as applied to advertising, photographic illustration, and photojournalism. Three lecture hours and four laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Journalism 355 with a grade of at least C, and acceptance into the photojournalism area of concentration; or consent of instructor.

**Topic 1: Location Lighting.**

**Topic 2: Studio Photography.**

### **J 373D. Advanced News Reporting.**

Study of community and institutional news sources; reporting on courts and city, county, and state governments; emphasis on fact-finding and skill in writing; in-depth reporting of significant events. Three lecture hours and six hours of laboratory reporting a week for one semester. Prerequisite: Journalism 320D with a grade of at least C, and admission to a journalism area of concentration.

### **J 375. Magazine Editing and Publishing.**

Restricted to journalism majors. Advanced magazine design and layout; critical analysis of the magazine in society. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 375, 376D, 377D. Prerequisite: Journalism 330 and 319 (or 336) with a grade of at least C in each.

### **J 376D. Newspaper Editing and Layout.**

Restricted to journalism majors. Advanced newspaper typography, layout, and editing. Graphics techniques and production processes; planning content and format of newspapers; copydesk management. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism 375, 376D, 377D. Prerequisite: Journalism 330 and 319 (or 336) with a grade of at least C in each.

### **J 377D. Print Design.**

Advanced print design and layout. Graphics techniques and production processes; planning content and format of newspapers and magazines. Three lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Journalism, 375, 376D, 377D. Prerequisite: Journalism 319 (or 336) with a grade of at least C, credit with a grade of at least C or registration for Journalism 330, and admission to a journalism area of concentration.

### **J 379. Journalism Independent Study.**

Restricted to journalism majors. Designed to give students the opportunity to pursue special studies for which separate courses have not been organized. The equivalent of nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Journalism

310F and 311F with a grade of at least B in each, and consent of the director of the school.

### **J 379H. Honors Tutorial Course.**

Restricted to journalism majors. Conference course of intensive study, planned by Journalism Honors Committee; research and the writing of a substantial paper on a special journalism topic. Individual instruction. May be repeated for credit. Prerequisite: Admission to the Journalism Honors Program and consent of the director of the school.

### **J 379P. Photojournalism Research Projects.**

Restricted to journalism majors. Designed to give photojournalism students the opportunity to pursue special studies for which separate courses have not been organized. The equivalent of nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to a journalism area of concentration and consent of the director of the school.

## **Department of Radio-Television-Film**

Most upper-division radio-television-film courses are restricted to radio-television-film majors. At any time, a nonmajor may ask the instructor for consent to register for the instructor's course. However, faculty members often do not give nonmajors consent to enroll until demand for the course can be determined on the first class day. For Radio-Television-Film 317 and 318, the department restricts enrollment during the first registration period to radio-television-film majors. During later registration periods, courses in which space is available may be opened to nonmajors.

Attendance is required at the first class meeting of Radio-Television-Film 317 and 318 and all upper-division radio-television-film courses. At the discretion of the instructor, students who do not attend the first class meeting may be dropped from the course, even if they have registered and paid their tuition.

The Department of Radio-Television-Film reserves the right to retain and to use for noncommercial purposes copies of all work completed by students as part of departmental course assignments.

Because prerequisites are subject to change, students should consult the *Course Schedule* before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Radio-Television-Film: RTF**

### **Lower-Division Courses**

#### **RTF 301N. Introductory Topics in Radio-Television-Film.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### **RTF 305 (TCCN: COMM 1307). Introduction to Media Studies.**

Introduction to historical, cultural, political, economic, and international characteristics of film, television, and other media in society. Two

lecture hours, one discussion hour, and one two-and-one-half-hour film screening a week for one semester. Required of all radio-television-film majors.

#### **RTF 309. Communication Technology and Society.**

Same as Communication 309. Study of communication technologies, from writing to the Internet; their uses in interpersonal, group, mass, and international contexts; and the impact of technologies on work. Three lecture hours and one discussion hour a week for one semester.

#### **RTF 312C. Introduction to Global Media.**

A world perspective on information, news, and entertainment communication systems; politics, technology, economics, and culture. Three lecture hours a week for one semester.

#### **RTF 314 (TCCN: COMM 2366). The Development of the Motion Picture.**

Survey of significant movements and schools of filmmaking through viewings and discussions of representative motion pictures; critical approaches to performance, sociological impact, visual aesthetics, and industry structure. Three lecture hours and one two-hour film screening a week for one semester. A one-hour discussion section may also be required.

#### **RTF 316 (TCCN: COMM 1335). History of US Radio and Television.**

Survey of history, technology, regulation, audience, and economics of radio, television, and related electronic media. Three lecture hours a week for one semester, with one screening of up to two hours a week as required.

#### **RTF 316M. Race, Ethnicity, and the Media.**

Same as Communication 316M. Critical review of contemporary and historical media images of, and discourses on, race and ethnicity. Introduction to relevant communication research and institutions. Three lecture hours and one discussion hour a week for one semester. Fulfills the communication and culture requirement in the College of Communication. Prerequisite: A major in the College of Communication.

#### **RTF 317. Narrative Strategies.**

Study of the way meaning is structured and perceived in the screen image; introduction to basic narrative techniques. Includes viewing and analysis of narrative examples. Three lecture hours and one two-and-one-half-hour film screening a week for one semester. Some sections may require an additional discussion hour. Required of all students in the production area. Students may not enroll in this course more than twice. Prerequisite: Radio-Television-Film 305.

#### **RTF 318. Introduction to Image and Sound.**

Restricted to radio-television-film majors. Exploration of fundamental production concepts and techniques through lectures, projects, and laboratory work. Three lecture hours and three laboratory hours a week for one semester. Students may not enroll in this course more than twice. Prerequisite: Radio-Television-Film 305.

#### **RTF 319. Introduction to Digital Media.**

Basic information, skills, and theories of digital media. Includes the study of computer-based image construction, Web-based tools for research and production, and theories of interactivity. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Radio-Television-Film 305.

**RTF 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S.**  
**Topics in Radio-Television-Film.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Radio-Television-Film. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

**RTF 321F. Media Analysis and Criticism.**

Restricted to radio-television-film majors. A foundational course devoted to the critical analysis of media in a variety of contexts. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.

**RTF 324F. Social Theories of Media.**

Restricted to radio-television-film majors. A foundational course exploring social theories of media. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.

**RTF 124L, 224L, 324L. Topics in the Entertainment Professions.**

Restricted to radio-television-film majors. Contemporary issues, practices, and skills related to communication and the entertainment industries, including studies in the business of entertainment, the entertainment professions, the creative process, and contemporary Hollywood cinema. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Radio-Television-Film 305, a University grade point average of at least 2.25, and admission to the Semester in Los Angeles program.

**RTF 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S.**  
**Topics in Radio-Television-Film.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Radio-Television-Film. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**RTF 330G. Topics in Media Research.**

Restricted to radio-television-film majors. Applied research investigating specific media topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of lower-division coursework in radio-television-film with a grade of at least C.

**RTF 330K. Introduction to Research Methods.**

Restricted to radio-television-film majors. Introduction to applied media research and research criticism; fundamentals of audience analysis,

survey design, experimental and field research, content analysis. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.

**RTF 330L. Internship in Film and Electronic Media.**

Restricted to radio-television-film majors. Position availability depends on qualifications of student and number of internships open at time of enrollment. Practical work experience related to the study of film, television, radio, or other media. Students must make their own arrangements to secure relevant internships. Internship listings are available in the college's career services office. At least ten hours of fieldwork a week for one semester. Radio-Television-Film 330L and 330M may not both be counted. Offered on the pass/fail basis only. Prerequisite: The following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; and consent of the internship coordinator.

**RTF 330M. Internship in Digital Media.**

Position availability depends on qualifications of student and number of internships open at time of enrollment. Practical work experience in digital media and postproduction media. One and one-half lecture hours and at least ten hours of fieldwork a week for one semester. Radio-Television-Film 330L and 330M may not both be counted. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, twelve semester hours of coursework in the College of Communication with a grade of at least C in each course, and consent of instructor.

**RTF 331J. Policy Issues in New Communication Technologies.**

Restricted to radio-television-film majors. Overview of policy and regulation of communication systems in the United States, with emphasis on contemporary technologies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.

**RTF 331K. Film, Video, and Television Theory.**

Restricted to radio-television-film majors. Survey of basic theories that seek to explain the relationships between film, video, television, and their respective audiences. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.

**Topic 1: Cult Movies and Gender Issues.**

**Topic 2: Television and Theories of Gender.**

**Topic 4: Feminist Media Theory.** Survey of basic feminist media theory.

**Topic 5: Screen Theory.** Survey of basic screen theory.

**RTF 331L. Corporate and Instructional Video.**

Restricted to radio-television-film majors. Study, design, production, use, and evaluation of corporate and instructional video materials. Three lecture hours a week for one semester, with studio hours to be



arranged. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B in each.

### **RTF 331M. New Communication Technologies.**

Restricted to radio-television-film majors. Survey of history of new communication technologies. Analysis of regulation, policy, economics, and programming of new communication technologies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.

### **RTF 331N. The Information Society.**

Restricted to radio-television-film majors. Introduction to information technologies such as the Internet, telephones, and computers and their relation to existing media; includes history, policy, economics, and social impact. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.

### **RTF 331P. Topics in New Communication Technologies.**

Restricted to radio-television-film majors. Applications and potential effects of new telecommunications and information technologies in the home and the workplace, and for education and social services. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.

### **RTF 331Q. Topics in Digital Media.**

Laboratory explorations of the spatial and narrative dimensions of the digital environment. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing.

### **RTF 331R. Topics in New Media.**

Students produce projects in either film, video, computer animation, collage, sculpture, assemblage, soundscape, or performance. Prior experience in one or more media is helpful but not necessary. Three lecture hours and one and one-half studio hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing.

### **RTF 331T. Topics in Digital Media: Audio.**

Explorations of the auditory dimensions of the digital environment. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the

following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing.

### **RTF 333. Introduction to Screenwriting.**

Restricted to radio-television-film majors. An introduction to screenwriting for features, short films, documentaries, and television. Lectures explore the basic theory of story, character, and structure. Students write original screenplays during workshop hours. One and one-half lecture hours and two workshop hours a week for one semester. Prerequisite: Upper-division standing; and the following coursework with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.

### **RTF 334. Programming and Audience Effects.**

Restricted to radio-television-film majors. Study of media programming and its cognitive and behavioral impact on audiences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.

### **RTF 335. Television Analysis and Criticism.**

Restricted to radio-television-film majors. Analysis of critical methods, selected television programs, and selected critics. Practice in written criticism required of all students. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.

### **RTF 336. Special Projects in Radio-Television-Film.**

Restricted to radio-television-film majors. Comprehensive research or creative projects in areas of special interest developed and executed by the student under faculty supervision. Individual instruction. May be repeated once for credit. Prerequisite: Upper-division standing; the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; and consent of instructor and the chair of the department.

### **RTF 337. Radio Fundamentals.**

Restricted to radio-television-film majors. Fundamentals of audio program production. Students create either brief or long audio programs. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

### **RTF 337P. Multitrack Audio Production.**

Restricted to radio-television-film majors. Principles and practice of multitrack audio production. Three lecture hours a week for one semester, with studio hours to be arranged. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film

with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

#### **RTF 340. Studio Production.**

Restricted to radio-television-film majors. Introduction to production of television programs, including the multicamera format. Three lecture hours and six laboratory hours a week for one semester. May not be taken concurrently with Radio-Television-Film 366 or 366K. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

- Topic 1: Drama/Music Production.**
- Topic 2: Public Affairs Production.**

#### **RTF 341. Audio Production: Sound for Picture.**

Restricted to radio-television-film majors. Theory and practice of producing quality audio for television, film, and other picture media. Includes basic editing on a digital audio workstation. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

#### **RTF 341C. Advanced Audio: Sound Design and Postproduction.**

Restricted to radio-television-film majors. Sound design and editing, and fundamentals of postproduction audio mixing. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 337, 337P, or 341.

#### **RTF 342. Topics in Global Media.**

Restricted to radio-television-film majors. Study of political, social, cultural, and economic factors affecting the use and impact of communication systems in an international context. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

- Topic 1: National Media Systems.**
- Topic 2: Comparative Media Systems.**
- Topic 3: International Communication: Third World Issues.** Same as Latin American Studies 322 (Topic 7: International Communication: Third World Issues) and Mexican American Studies 374 (Topic 17: International Communication: Third World Issues).
- Topic 4: Participatory Media.**
- Topic 6: Development Communication.** Same as Middle Eastern Studies 341 (Topic 4: Development Communication). Only one of the following may be counted: Middle Eastern Studies 322K (Topic 14: Development Communication), 341 (Topic 4), Radio-Television-Film 342 (Topic 6).
- Topic 7: Global Media Systems.**

#### **RTF 342T. International Telecommunications.**

Restricted to radio-television-film majors. Overview of issues and history of international telecommunication systems, focusing on

the roles of business and government. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 309, and six additional semester hours of lower-division coursework in radio-television-film.

#### **RTF 343. Advanced Video Production.**

Restricted to radio-television-film majors. Advanced study in film, television, and media production. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 340, 366, or 366K; additional prerequisites vary with the topic.

- Topic 1: Advanced Narrative Production.** Individual and group production of short films using high-definition video.
- Topic 2: Advanced Documentary Production.** Individual and group production of a documentary, from research and preproduction to completion.
- Topic 3: Advanced Soundstage Production.** Group production of short films using the Hollywood soundstage as the primary model.
- Topic 4: Creating Cross-Platform Fundraising Media.** Small group production of client-commissioned fundraising media and an exploration of the realm of independent production contracting. Radio-Television-Film 343 (Topic 4) and 344M (Topic: Cross-Platform Content Creation) may not both be counted. Additional prerequisite: Upper-division standing, and Radio-Television-Film 346, 366D, 366K, or 368 with a grade of at least B.

#### **RTF 343M. Master Class.**

Restricted to radio-television-film majors. Incorporates a guest speaker series, focused on a particular topic for the semester. Students conduct research, coordinate and attend the speaker series, and pursue creative projects related to the semester's topic. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and twelve semester hours of lower-division coursework in radio-television-film.

#### **RTF 343S. Soundstage Production for Television and Film.**

Restricted to radio-television-film majors. Study of the skills and aesthetics related to professional-level productions in the soundstage format. Three lecture hours and three laboratory hours a week for one semester. Radio-Television-Film 343 (Topic: Soundstage Production for Television and Film) and 343S may not both be counted. Prerequisite: Radio-Television-Film 340 or 366K with a grade of at least C.

#### **RTF 344. Special Applications of Media Production.**

Restricted to radio-television-film majors. Special problems involved in audio, film, and video production. Three lecture hours a week for one semester, with studio hours to be arranged if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each. Additional prerequisites vary with the topic.

#### **RTF 344M. Special Applications of Digital Media Production.**

Special topics in digital media theory, design, or development. May include visual effects and motion graphics or digital media and digital art. Three lecture hours a week for one semester, with studio hours

to be arranged. May be repeated for credit when the topics vary.  
Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, 318 or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319; for others, upper-division standing and consent of instructor.

**Topic 1: Interactive Digital Storytelling.** Workshop in creative digital film content for the Web. Includes digital media and digital art.

### **RTF 344N. Advanced Applications of Digital Media Production.**

Advanced topics in digital media theory, design, and development. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and Radio Television and Film 344M with a grade of at least C; for others, upper-division standing and consent of instructor; additional prerequisites vary with the topic.

**Topic 1: Advanced Visual Effects.** Radio-Television-Film 344M (Topic: Advanced Visual Effects) and 344N (Topic 1) may not both be counted. Offered on the letter-grade basis only. Prerequisite: For radio-television-film majors, Radio-Television-Film 344M (Topic: Visual Effects & Motion Graphics) with a grade of at least C; for others, upper-division standing and consent of instructor.

### **RTF 345. Studies in Film History.**

Restricted to radio-television-film majors. Critical assessment of major genres, periods, movements, and personalities in United States and international film history. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film.

**Topic 1: Third World Cinema: Asia and the Middle East.**  
**Topic 2: Israeli Cinema and Television.** Only one of the following may be counted: Jewish Studies 363 (Topic 16: Israeli Cinema and Television), Middle Eastern Studies 325 (Topic 2: Israeli Cinema and Television), Radio-Television-Film 345 (Topic 2).  
**Topic 3: History of Mexican Cinema.**  
**Topic 4: Latin American Cinema.**  
**Topic 5: Third World Cinema: Africa and the Americas.**  
**Topic 6: Experimental Film and Video.** Critical assessment of the history and current trends in experimental film and video. Radio-Television-Film 331K (Topic: Experimental Film and Video) and 345 (Topic 6) may not both be counted.

### **RTF 346. Introduction to Editing.**

Restricted to radio-television-film majors. Theory and practice of video and film editing techniques. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

### **RTF 346C. Intermediate Editing.**

Restricted to radio-television-film majors. In-depth look at the principles, techniques, and aesthetics of editing; building a broad background for students' future professional development. Designed to provide a basic-to-intermediate level of familiarity with Avid

editing software, by discussing and working on provided narrative, documentary, and technical exercises; various approaches to editing style in each case. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each; Radio-Television-Film 317 and 318 with a grade of at least B- in each; and Radio-Television-Film 346 with a grade of at least B.

### **RTF 346E. Advanced Editing.**

Restricted to radio-television-film majors. Designed to simulate a professional experience in which students act as editors for a specific creative project. Emphasizes organizational, technical, and stylistic issues relevant to each particular project. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Radio-Television-Film 344 (Topic: Advanced Editing) and 346E may not both be counted. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Radio-Television-Film 346C.

### **RTF 347C. The Business of Media.**

Restricted to radio-television-film majors. Survey of business practices in film, television, and music industries: development, production, distribution, and exhibition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.

### **RTF 348. Studies in Media Industries.**

Restricted to radio-television-film majors. Examination of the economics and the production, research, management, and distribution practices of the film and electronic media industries. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film.

### **RTF 351C. Introduction to Digital Animation and Graphics.**

Restricted to radio-television-film majors. Theory and practice of digital graphics and animation techniques. Three lecture hours a week for one semester, with studio hours to be arranged. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, 318, or 319, and six additional semester hours of coursework chosen from Radio-Television-Film 309, 314, 316, 317, 318, and 319.

### **RTF 351D. Two-Dimensional Animation and Motion Graphics.**

Restricted to radio-television-film majors. In-depth study of two-dimensional animation techniques and an introduction to stop-motion animation, green screen techniques, and postproduction effects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Only one of the following may be counted: Radio-Television-Film 344M (Topic: Advanced Digital Animation), 344M (Topic: Two-Dimensional Animation and Motion Graphics), 351D. Prerequisite: Radio-Television-Film 351C.

### **RTF 351T. Three-Dimensional Animation.**

Restricted to radio-television-film majors. Introduction to the art of three-dimensional animation using lectures, workshops, screenings,



and labs. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Radio-Television-Film 344M (Topic: Three-Dimensional Animation) and 351T may not both be counted. Prerequisite: Radio-Television-Film 351D.

### **RTF 359. Studies in Media and Culture.**

Restricted to radio-television-film majors. Special topics related to the critical analysis of media in cultural contexts. Three lecture hours a week for one semester. Radio-Television-Film 359 and 359S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, prerequisites vary with the topic and are given in the Course Schedule.

**Topic 2: Race and Popular American Culture.** Same as African and African Diaspora Studies 321M and Sociology 321M. The intersection of African American racial politics and the changing popular media industry, especially film, music, and television. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing.

### **RTF 359S. Studies in Media and Culture.**

Restricted to radio-television-film majors. Special topics related to the critical analysis of media in cultural contexts. Three lecture hours and one two-hour film screening a week for one semester. Radio-Television-Film 359 and 359S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, prerequisites vary with the topic and are given in the Course Schedule.

**Topic 1: Hispanic Images and Counterimages.** Same as Latin American Studies 322 (Topic 1: Hispanic Images and Counterimages) and Mexican American Studies 374 (Topic 9: Hispanic Images and Counterimages). The critical analysis of Hispanic images in media. Prerequisite: For radio-television-film majors, upper-division and the following coursework, with a grade of at least C in each course Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 2: Women and Media Culture.** Critical analysis of media and its interrelation with issues of gender. Radio-Television-Film 359 (Topic: Women and Media Culture) and 359S (Topic 2) may not both be counted.

**Topic 3: Gender and Rock Culture.** Critical analysis of issues relating to media, gender, and rock culture. Radio-Television-Film 331K (Topic: Gender, Sexuality, and Rock Culture) and 359S (Topic 3) may not both be counted.

**Topic 4: Media, Memory, and History.** Critical analysis of the relationship between historical events and media.

### **RTF 365. Topics in Media and Society.**

Restricted to radio-television-film majors. Advanced topics addressing media, communication, and society. Three lecture hours a week for

one semester, with additional hours to be arranged if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: Latino Audiences.** Same as Latin American Studies 322 (Topic 2: Latino Audiences) and Mexican American Studies 374 (Topic 10: Latino Audiences). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 3: Mass Media and Ethnic Groups.** Same as Latin American Studies 322 (Topic 3: Mass Media and Ethnic Groups) and Mexican American Studies 374 (Topic 11: Mass Media and Ethnic Groups). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 4: History of United States Latino Media.** Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of coursework in radio-television-film.

**Topic 5: Latin American Media.** Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of lower-division coursework in radio-television-film.

**Topic 6: Latinos and Media.** Same as Latin American Studies 322 (Topic 12: Latinos and Media) and Mexican American Studies 374 (Topic 24: Latinos and Media). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 7: Narrowcasting.** Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of lower-division coursework in radio-television-film.

**Topic 8: Migration and Media.** Advanced study of global media issues, including traditional and digital media use, social inclusion, and migration to the United States from Latin America, Asia, and elsewhere. Students conduct research on the relationships between media and migration. Prerequisite: Upper-division standing, Radio-Television-Film 305 with a grade of at least C, and nine additional semester hours of coursework in radio-television-film.

### **RTF 365C. Media and Policy.**

Advanced topics addressing media and policy in society. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For radio-television-film majors, the following coursework with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, consent of instructor.

**Topic 1: Media, Communication Law, and Ethics.** Contemporary ethical and policy issues facing the transforming media industries and the American public. Rooted in an understanding of the First Amendment as well as the development of communication industries, the course examines a range of topics that new media and the Internet have complicated. Radio-Television-Film 365 (Topic: Media, Communication Law, and Ethics) and 365C (Topic



1) may not both be counted. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

### **RTF 366. Introduction to Field and Studio Production.**

Restricted to radio-television-film majors. Basic theory and techniques in single-camera video production; individual and collective production assignments, with emphasis on technical proficiency, examination of the entire production process, visualization of ideas, and critical evaluation of the visual text. Three lecture hours and six laboratory hours a week for one semester. May not be taken concurrently with Radio-Television-Film 340 or 366K. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B in each.

### **RTF 366D. Directing Workshop.**

Restricted to radio-television-film majors. Explores the role of the director, focusing on the director-actor relationship, narrative structure, and visual language. Three lecture hours and three laboratory hours a week for one semester. Radio-Television-Film 344 (Topic: Directing Workshop) and 366D may not both be counted. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; Radio-Television-Film 317 and 318 with a grade of at least B- in each; and a University grade point average of at least 2.25.

### **RTF 366K. Introductory Production.**

Restricted to radio-television-film majors. Workshops in narrative and documentary production. Three lecture hours and three laboratory hours a week for one semester. May not be taken concurrently with Radio-Television-Film 340 or 366. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

**Topic 2: Narrative Production.** A workshop in visual storytelling and making non-dialogue films.

**Topic 3: Documentary Production.** Workshop in contemporary documentary practice, including directing, producing, cinematography, editing, sound recording, and distribution.

**Topic 4: East Austin Stories.** Students work in small production groups and make documentaries in and about East Austin for public screening at the end of the semester and for Webcasting.

### **RTF 367K. Producing Film and Television.**

Restricted to radio-television-film majors. Comprehensive consideration of the production process from the producer's standpoint regarding fiscal and creative management. Includes development and preproduction and production planning using computer budgeting and scheduling. Three lecture hours a week for one semester, with computer laboratory hours to be arranged. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Radio-Television-Film 305 and three additional semester hours of lower-division coursework in radio-television-film with a grade of at least C in each

course; and Radio-Television-Film 317 and 318 with a grade of at least B- in each.

### **RTF 367L. Narrative Filmmaking: 16-mm.**

Restricted to radio-television-film majors. Theory and techniques in 16-mm film synchronous sound production; individual and collective production assignments, with emphasis on technical proficiency, examination of entire production process, visualization of ideas, and critical evaluation of the visual text. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Radio-Television-Film 366K.

### **RTF 367P. Advanced Producing.**

Restricted to radio-television-film majors. Advanced practical application of the business and creative skills used to produce and distribute media projects in the marketplace. Three lecture hours a week for one semester. Radio-Television-Film 344 (Topic: Advanced Producing) and 367P may not both be counted. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 367K.

### **RTF 368. Advanced Production Topics.**

Restricted to radio-television-film majors. Advanced study of production crafts in film, television, and other digital media. Three lecture hours and three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 343 or 367L.

**Topic 2: Cinematography.**

**Topic 3: Advanced Production.**

**Topic 4: Advanced Directing.**

### **RTF 368S. Undergraduate Thesis.**

Restricted to radio-television-film majors. Advanced film production or media studies research. Three lecture hours a week for one semester, with studio hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 343, 367L, or 368; and consent of instructor.

**Topic 1: Film Production Thesis.** Intensive production workshop, designed for students who wish to produce a film for a portfolio.

**Topic 2: Media Studies Thesis.** An independent research project based on primary data, resulting in a written summary of theoretical foundations, methodological approach, results, and a discussion.

### **RTF 369. Advanced Screenwriting.**

Restricted to radio-television-film majors. Students develop and write original screenplays. Includes advanced study of screenplay structure, critical analysis of student and professional work, and intensive writing each week toward a completed script. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Radio-Television-Film 333 with a grade of at least B-.

**Topic 1: Advanced Screenwriting for Feature Films.**

**Topic 2: Advanced Screenwriting for Television.**

### **RTF 370. Film Analysis and Criticism.**

Restricted to radio-television-film majors. Analysis of critical methods, selected films, and selected critics. Three lecture hours a week for one semester, with one two-hour film screening a week if required by the topic. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or

316, and six additional semester hours of lower-division coursework in radio-television-film.

**RTF 178. Radio-Television-Film Internship.**

Restricted to radio-television-film majors. Practical work experience related to the study of film, television, radio, or other media. Students must make their own arrangements to secure relevant internships. Internship listings are available in the college's career services office. The equivalent of ten class hours a week for one semester. May be repeated once for credit. Offered on the pass/fail basis only. Prerequisite: Radio-Television-Film 330L and consent of the internship coordinator.

**RTF 378H. Honors Tutorial Course.**

Intensive reading, research, and/or production project. Individual instruction. May be repeated once for credit. Prerequisite: Upper-division standing; the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio- television-film; consent of instructor; a University grade point average of at least 3.00 and a grade point average in radio-television- film of at least 3.50; and consent of the department chair.

# College of Education

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Manuel J. Justiz, PhD, *Dean*  
Marilyn C. Kameen, EdD, *Senior Associate Dean*  
Sherry L. Field, PhD, *Associate Dean*  
<http://www.edb.utexas.edu/education/>

## General Information

### Mission

The University of Texas at Austin, through the College of Education, is committed to the preparation of teachers and other educators who are dedicated to the employment and advancement of education for all people. In pursuing this mission, the College of Education performs several functions.

It is a professional school offering two teacher certification degrees. The first degree, the Bachelor of Science in Applied Learning and Development, allows students to pursue early childhood through grade six generalist or bilingual generalist teacher certification or generic special education certification for early childhood through grade twelve. The second degree, the Bachelor of Science in Kinesiology and Health, offers a major that leads to all-level physical education certification.

The college provides the professional sequence of education courses and serves as the certification agent for all University students pursuing certification to teach in Texas, whether they are enrolled in the College of Education or in another division of the University. Accountability information for the teacher preparation program is given in *General Information* (<http://catalog.utexas.edu/general-information/>).

The college also offers degree programs that do not lead to teacher certification. These programs, in youth and community studies, athletic training, exercise science, health promotion, sport management, and physical culture and sports, are designed to meet the professional needs of public and private educational and community service agencies and to prepare students for advanced study.

As a unit of the Graduate School, the College of Education offers courses and curricula leading to advanced professional certificates and to master's and doctoral degrees in education. It also provides in-service training and consulting services for those engaged in the educational professions.

Departments in the college offer courses in general education as well as in various specialties suitable for students pursuing vocational objectives other than teaching.

The college is also a center for research, experimentation, and a wide variety of direct services to school systems and other educational and public service enterprises.

### Facilities

The instructional and research programs of the College of Education are carried out in five buildings. The primary facility, the George I. Sánchez Building, contains classrooms, extensive computer facilities, electronic media resources, observation rooms, a learning technology center, a distance learning classroom, and faculty offices. Belmont Hall, the primary facility for the Department of Kinesiology and Health Education, houses classrooms, research and computer laboratories,

gymnasium and locker facilities, racquet sport courts, and faculty offices. College of Education faculty members and programs are also housed in Anna Hiss Gymnasium, Gregory Gymnasium, and the Lee and Joe Jamail Texas Swimming Center.

## Financial Assistance Available through the College

Scholarships as well as graduate fellowships and assistantships are available to students in the College of Education. Application for all undergraduate awards and some graduate awards should be made to the Office of the Dean, George I. Sánchez Building 216; graduate students should also inquire in their departmental offices. Generally, applications are accepted online in March for the following academic year.

## Student Services

The Office of the Dean of the College of Education provides a variety of student services, including maintenance of student records, academic counseling, certification counseling, and official evaluations of the student's academic standing and progress toward a degree. Students are encouraged to contact the office whenever they have questions about degree requirements, academic standing, teacher certification, general University regulations, or registration. The office is also a good source of general information and referral that students are urged to use when they have questions or problems of any nature.

## Academic Advising

The College of Education encourages all students to see their advisers at least once a semester for a comprehensive discussion of their programs. Academic advisers are available in George I. Sánchez Building 216 and Belmont Hall 1005.

## Career Services

The College of Education offers career services to assist University students in making informed career choices. Education Career Services makes job search materials, events, and counseling accessible to students on a regular basis. Information about these services is available at <http://www.edb.utexas.edu/education/edservices/career/>.

As a complement to the assistance available from the college, the University's Sanger Learning Center and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies provide comprehensive career services to all students. The centers offer professional assistance to all University students in choosing or changing their majors or careers, seeking an internship, and planning for the job search or for graduate study.

## Student Organizations

The Education Council is the official channel for student participation in policy formulation and evaluation and in development of student activities in the college. Voluntary organizations in the college include the Bilingual Education Student Organization, the Kinesiology Club, Longhorn Athletic Training Student Association, Minorities in Education, the Student Council for Exceptional Children, and Teachers of Tomorrow. Pi Lambda Theta, Phi Delta Kappa, and Kappa Delta Pi are honorary organizations for men and women.

# Admission and Registration

## Admission

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information* (<http://catalog.utexas.edu/general-information>).

Information about admission to teacher preparation programs is available in the Office of the Dean, George I. Sánchez Building 216. Information about admission to majors in the Department of Kinesiology and Health is available in the Kinesiology Advising Center, Belmont Hall 1005.

Admission to majors in kinesiology is restricted for internal transfer students. Students should see an adviser in the Kinesiology Advising Center for information.

## Admission to the Professional Development Sequence

All students seeking teacher certification must complete a sequence of professional development courses. Admission to the Professional Development Sequence is restricted. Space availability may be a factor in the admission decision, as well as academic performance, completion of prerequisite courses, documented evidence of proficiency in reading and in oral and written communication, and the number of hours the student needs, at the time of application, to complete the program.

For students seeking early childhood through grade six, all-level generic special education, or all-level physical education certification, admission to the Professional Development Sequence requires a University grade point average of at least 2.50 and a grade of at least C in each prerequisite course and in each course in the major. To progress within the sequence, and to complete the sequence, the student must maintain a University grade point average of at least 2.50 and must earn a grade of at least C in each course in the sequence. In addition, when they enter the Professional Development Sequence, students seeking early childhood through grade six and all-level generic special education certification may lack no more than twelve semester hours of coursework outside the sequence. Additional information about these requirements is available in the Office of the Dean, George I. Sánchez Building 216.

For students in other teacher certification programs, requirements for admission to and continuation in the Professional Development Sequence are set by the college in which the student majors.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule* (<http://registrar.utexas.edu/schedules>), published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* (<http://registrar.utexas.edu/schedules>) and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>. The printed *General Information* is sold at campus-area bookstores.

# Academic Policies and Procedures

## Honors

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

## Graduation

### Special Requirements of the College

All students must fulfill the General Requirements (p. 18) for graduation. In addition, students in the College of Education must be registered in the college either in residence or in absentia the semester or summer session the degree is to be awarded and must apply to the dean for the degree no later than the date specified in the official academic calendar. The student must have an official degree audit on file prior to applying for the degree.

### Applying for Graduation

Each student seeking a degree from the College of Education should apply for an official degree audit in the Student Dean's Office, George I. Sánchez Building 216 or the Kinesiology Advising Center, Belmont Hall 1005. The degree audit is essential to ensure that the student meets all the degree requirements given in a catalog under which he or she is eligible to graduate.

In the final semester or summer session, a candidate for graduation must apply for the degree by the deadline given in the official academic calendar.

## Degrees

### General Requirements

1. All College of Education students seeking teacher certification must complete the entire Professional Development Sequence of coursework in residence. Residence credit includes only courses taken at the University; it does not include credit by examination, courses taken by extension or correspondence, or courses taken at another institution.
2. Students seeking teacher certification must adhere to current state requirements, even if they differ from the degree requirements described in this catalog.
3. Except as otherwise indicated, credit by examination is treated like any other earned credit in meeting degree requirements.



4. With the exception of credit earned by examination, each course counted toward the degree or toward certification requirements must be taken on the letter-grade basis, unless the course is offered only on the pass/fail basis.
5. To graduate, all students must have a University grade point average of at least 2.00.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. Up to three semester hours of physical activity coursework may be counted as electives toward any College of Education degree. All physical activity courses are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

### ROTC Courses

A maximum of twelve semester hours of credit in air force science, military science, or naval science may be used as free electives in any degree plan of the College of Education.

### Concurrent Enrollment and University Extension Courses

In the semester they plan to graduate, students may not take any course to be counted toward the degree at another institution or through University extension; students who plan to graduate at the end of the summer session may request approval to take transfer work only in the first summer term.

## Bachelor of Science in Applied Learning and Development

The curriculum for the degree has four components: (a) the University-wide core curriculum; (b) prescribed work for the Bachelor of Science in Applied Learning and Development; (c) major requirements; and (d) electives. Students choose one of three majors: early childhood through grade six generalist, which can lead to early childhood through grade six generalist certification or early childhood through grade six bilingual generalist certification; all-level generic special education, which can lead to all-level generic special education certification; or youth and community studies, which does not lead to teacher certification.

The youth and community studies major requires 120 hours of coursework; the early childhood through grade six generalist major requires 124 hours of coursework; the early childhood through grade six generalist major with bilingual generalist certification requires 125 hours of coursework; and the all-level generic special education major requires 127 hours of coursework. Students in all majors must complete at least 36 hours of upper-division coursework.

### Core Curriculum

All students must complete the University's Core Curriculum (p. 22). In some cases, a course that is required for the Bachelor of Science in Applied Learning and Development may also be counted toward the core curriculum; these courses are identified in prescribed courses below.

## Prescribed Work and Flag Requirements

In the process of fulfilling the core curriculum and other degree requirements, students pursuing the Bachelor of Science in Applied Learning and Development must complete courses that carry flags in the following areas. Courses used to fulfill flag requirements may also be used to fulfill other requirements.

1. Two courses that carry a writing flag.
2. One course that carries a global cultures flag.
3. One course that carries a cultural diversity in the United States flag.
4. One course that carries a quantitative reasoning flag.

All students must complete the following requirements. The youth and community studies major requires modifications to the prescribed work; these are described in the section for the major below.

1. Information Studies 322T.
2. Psychology 301. This course may also be used to fulfill the social and behavioral sciences requirement of the core curriculum.
3. Natural Sciences 306J, 306K, and 306L. These courses may also be used to fulfill parts I and II of the science and technology requirement of the core curriculum. In addition, students must complete Natural Sciences 306M.
4. Mathematics 316K and 316L.
5. Foreign language: Students must demonstrate proficiency in a single foreign language equivalent to that shown by completion of the second college semester in the language; proficiency is usually shown by earning credit for language courses 506 and 507 or the equivalent. Prospective Texas teachers are strongly encouraged to take Spanish to fulfill the language requirement.

Although the foreign language requirement is the attainment of a certain proficiency, rather than the completion of a specified number of hours, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

Students who completed two years of a single foreign language in high school and who are not pursuing teacher certification may substitute three courses in specific multicultural and language/communication courses for the foreign language requirement. A list of the acceptable substitute courses is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Belmont Hall 1005.

## Major Requirements

### Early Childhood Through Grade Six ESL Generalist

Students who have completed the early childhood through grade six ESL generalist major are eligible to teach pre-kindergarten through grade six after meeting additional state requirements. By choosing appropriate options within this program, students may also become qualified for certification in bilingual education.

For this major, students must complete the following:

1. Coursework in applied learning and development:
  - a. Three semester hours in cognition and learning chosen from Applied Learning and Development 320 and 321

- b. Applied Learning and Development 322
  - c. Applied Learning and Development 327
  - d. Applied Learning and Development 328
  - e. Applied Learning and Development 329
  - f. Health Education 329K
  - g. Kinesiology 314
2. A curricular specialization consisting of Curriculum and Instruction 370E (Topic 1: *Reading*), 370E (Topic 2: *Language Arts*), 370E (Topic 20: *Teaching English as a Second Language*), and either Special Education 378T (Topic: *Reading Difficulties*) or Curriculum and Instruction 371R
  3. The Professional Development Sequence described below. Students seeking bilingual education certification must take a special sequence of these professional development courses with an appropriate emphasis. Admission to the Professional Development Sequence is restricted; admission requirements are given in Admission to the Professional Development Sequence (p. 121).
    - a. Methods courses: Curriculum and Instruction 370E (Topic 3: *Science*), 370E (Topic 4: *Social Studies*), and 370E (Topic 5: *Mathematics*)
    - b. Curriculum and Instruction 331E
    - c. Curriculum and Instruction 371G
    - d. Curriculum and Instruction 950E

## All-Level Generic Special Education

Students who have completed the all-level generic special education major are eligible to teach in special education classrooms from pre-kindergarten through grade twelve after meeting additional state requirements.

For this major, students must complete the following:

1. Coursework in applied learning and development and related areas:
  - a. Three semester hours in human development chosen from Human Development and Family Sciences 313 and Psychology 304
  - b. Three semester hours in cognition and learning chosen from Applied Learning and Development 320 and 321
  - c. Applied Learning and Development 322, 326, 327, and 328
2. Prescribed work in special education: Special Education 332, 337, 372, 375C, 376, 378D, 378E, 378R, and 378S
3. The Professional Development Sequence described below. Admission to the Professional Development Sequence is restricted; admission requirements are given in Admission to the Professional Development Sequence (p. 121).
  - a. Curriculum and Instruction 370E (Topic 5: *Mathematics*), 370E (Topic 1: *Reading*), and 370E (Topic 2: *Language Arts*)
  - b. Curriculum and Instruction 331E
  - c. Special Education 960

## Youth and Community Studies

Completion of a major in youth and community studies does not entitle the student to receive a teaching certificate.

1. The Prescribed Work, with the following modifications:
  - a. A course in English or rhetoric and writing may be counted in place of Information Studies 322T. The course used to fulfill the humanities requirement of the core curriculum may not also be counted toward this requirement.
  - b. Students must complete a three-semester-hour course in anthropology, economics, geography, linguistics, or sociology in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum.
  - c. Students are not required to take Natural Sciences 306J, 306K, 306L, and an additional natural sciences or computer science course. However, they must complete the science and technology, part I and part II, requirements of the core curriculum.
  - d. Mathematics 316K and 316L are not required.
  - e. Students must take a three-semester-hour computer applications course.
2. Coursework in applied learning and development and related fields:
  - a. Applied Learning and Development 320, 322, 327, and 329
  - b. Applied Learning and Development 321 or Educational Psychology 363M
  - c. Health Education 329K
  - d. Three semester hours of coursework in kinesiology or health education
3. A minor of at least fifteen semester hours, six of which must be upper-division, in any approved field of study in the University outside of the College of Education. At least six of the required fifteen hours must be completed in residence. No more than six hours in the minor may also be counted toward other degree requirements. Information about approved areas of study and specific courses that may be used is available in the Student Dean's Office, George I. Sánchez Building 216.
4. Professional concentration: Fifteen semester hours selected from one of the following four concentrations: Early Childhood, Special Populations, Coaching, and Youth and Social Services. A list of courses in each concentration is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Belmont Hall 1005.

## Electives

Additional elective coursework may be needed to provide the total number of semester hours required for the student's major. Students in all majors must complete at least thirty-six hours of upper-division coursework.

# Bachelor of Science in Athletic Training

Students who plan to major in athletic training must be admitted to the Athletic Training Education Program (ATEP). Admission is based on a competitive application process. The student's grade point average and completion of prescribed coursework are factors in the admission decision. Applicants must also participate in the Directed Observation Program, meet a set of technical standards, pass a health assessment/physical examination, provide proof of immunizations and vaccinations, submit letters of recommendation, and submit additional application documents. More information about the admission process and requirements is available from an academic adviser and at <http://www.edb.utexas.edu/education/departments/undergrad/at/atep/>.

In addition to completing the coursework associated with the athletic training major, students in the ATEP must participate in clinical rotations and become adept in a set of educational competencies and clinical proficiencies. Students who plan to take the Board of Certification (BOC) examination or the state licensure examination for athletic trainers must complete the ATEP.

The curriculum for the degree has four components: (a) the University-wide core curriculum; (b) prescribed work; (c) major requirements; and (d) electives. A total of at least 120 semester hours of coursework is required; at least thirty-six hours must be in upper-division courses.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22). In some cases, a course that is required for the Bachelor of Science in Athletic Training may also be counted toward the core curriculum; these courses are identified below.

## Flag Requirements

In the process of fulfilling the core curriculum and other degree requirements, students pursuing the Bachelor of Science in Athletic Training must complete courses that carry flags in the following areas. Courses used to fulfill flag requirements may also be used to fulfill other requirements.

1. Two courses that carry a writing flag.
2. One course that carries a quantitative reasoning flag.

## Prescribed Work

1. *Writing*: Two courses with a writing flag. These courses are identified in the *Course Schedule*
2. *Social science*
  - a. Psychology 301
  - b. Three hours of coursework in anthropology, economics, geography, linguistics, or sociology

Psychology 301 and several social science courses that fulfill requirement b may also be counted toward the social and behavioral sciences requirement of the core curriculum.

3. *Mathematics*: Mathematics 305G or coursework in calculus. Mathematics 305G and several calculus courses may also be counted toward the mathematics requirement of the core curriculum.

4. *Natural science*: Many courses that fulfill this natural science requirement may also be counted toward the science and technology requirements of the core curriculum.
  - a. Biology 301L and 309D, or 309D and 311C
  - b. Six hours of coursework in chemistry
  - c. Three hours of coursework in astronomy, biology, chemistry, computer applications, computer science, geological sciences, mathematics, physical science, physics, experimental psychology, physical anthropology, physical geography, history of science, or philosophy of science
5. Classical Civilization 306M
6. Communication Studies 306M
7. *Foreign language*: Students must demonstrate proficiency in a single foreign language equivalent to that shown by completion of the second college semester in the language; proficiency is usually shown by earning credit for language courses 506 and 507 or the equivalent. Prospective Texas teachers are strongly encouraged to take Spanish to fulfill the language requirement. Although the foreign language requirement is the attainment of a certain proficiency rather than the completion of a specified number of hours, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination. Students who completed two years of a single foreign language in high school and who are not pursuing teacher certification may substitute three courses in specific multicultural and language/communication courses for the foreign language requirement. A list of acceptable substitute courses is available in the Student Dean's Office, George I. Sánchez Building 216, or in the Kinesiology Advising Center, Belmont Hall 1005.

## Major Requirements

1. The following courses:
  - a. Kinesiology 312 (Topic 2: *Care and Prevention of Athletic Injuries*)
  - b. Kinesiology 119 (Topic 10: *Conditioning*)
  - c. Kinesiology 219K (Topic 3: *Introduction to Athletic Training*)
  - d. Kinesiology 324K, *Applied Human Anatomy*
  - e. Kinesiology 325K, *Physiology of Exercise*
  - f. Kinesiology 320, *Applied Biomechanics of Human Movement*; or Kinesiology 326K, *Kinesiology: Biomechanical Analysis of Movement*
  - g. Kinesiology 330E, *Sport Nutrition*; or *Nutrition 306, Fundamentals of Nutrition*
  - h. Kinesiology 341, *Therapeutic Modalities in Athletic Training*
  - i. Kinesiology 342, *Clinical Evaluation of Athletic Injuries in the Lower Body*
  - j. Kinesiology 343, *Clinical Evaluation of Athletic Injuries in the Upper Body*
  - k. Kinesiology 344, *Therapeutic Exercise and Rehabilitation Techniques*
    - l. Kinesiology 345, *Topics in Athletic Training*
  - m. Kinesiology 346, *Athletic Training Program Administration*

2. Students enrolled in the Athletic Training Education Program must complete a practicum course, determined by the faculty adviser, for each semester of their clinical rotations.
3. Three additional hours of coursework in kinesiology or health education.

## Electives

Additional elective coursework may be required to provide the 120 semester hours required for the degree. Up to six hours of fieldwork may be counted toward the degree as electives. Up to three hours in physical education activity coursework (PED) may be counted as electives.

## Bachelor of Science in Kinesiology and Health

The field of kinesiology consists of biomechanical, physiological, psychological, managerial, epidemiological, rehabilitative, and sociocultural approaches to the study of human movement and personal and public health. The Bachelor of Science in Kinesiology and Health degree program offers five majors: exercise science, physical culture and sports, health promotion, sport management, and applied movement science.

The applied movement science program is designed for students interested in studying human movement as a background for helping others develop motor skills, physically active lifestyles and fitness. Students who successfully complete the program can be recommended for teacher certification in physical education. The exercise science program is appropriate preparation for further study in sport and exercise sciences or in movement-related areas such as physical therapy and sport medicine. The health promotion major is designed to prepare graduates for a number of professions involving wellness, fitness, rehabilitation, public health, and disease prevention. The sport management major is designed for students who are interested in the organization, marketing, and management of sports programs. The physical culture and sports major is designed to prepare students for graduate school and/or careers related to a social science approach to sport and exercise.

The curriculum for the degree has four components: (a) the University-wide core curriculum; (b) prescribed work for the Bachelor of Science in Kinesiology and Health; (c) major requirements, which include a minor or specialization; and (d) electives. More information, including a list of specializations and minors, is available from the College of Education Student Dean's Office, George I. Sánchez Building 216, and the Kinesiology Advising Center, Belmont Hall 1005.

A total of at least 126 semester hours of coursework is required for the Bachelor of Science in Kinesiology and Health with a major in applied movement science; the other majors require at least 120 hours of coursework. For all majors, at least thirty-six hours must be in upper-division coursework.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22). In many cases, a course that is required for the Bachelor of Science in Kinesiology and Health may also be counted toward the core curriculum; these courses are identified below.

## Flag Requirements

In the process of fulfilling the core curriculum and other degree requirements, students pursuing the Bachelor of Science in Kinesiology and Health must complete courses that carry flags in the following areas. Courses used to fulfill flag requirements may also be used to fulfill other requirements.

1. Two courses that carry a writing flag.
2. One course that carries an ethics and leadership flag. Kinesiology 347 carries an ethics and leadership flag.
3. One course that carries a quantitative reasoning flag.
4. One course that carries a global culture flag.
5. One course that carries a cultural diversity in the United States Flag. Health Education 329K carries a cultural diversity in the United States flag.

## Prescribed Work

All students must complete the following requirements. Some majors require modifications to the prescribed work; these are described in the section for each major below.

1. *Writing*: Two courses with a writing flag. These courses are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>.
2. *Social science*
  - a. Psychology 301.
  - b. Three hours of coursework in anthropology, economics, geography, linguistics, or sociology.

Psychology 301 and several social science courses that fulfill requirement b may also be counted toward the social and behavioral sciences requirement of the core curriculum.

3. *Mathematics*: Three hours of coursework in mathematics. Several courses that fulfill this requirement may also be counted toward the mathematics requirement of the core curriculum.
4. *Natural science*
  - a. Biology 301L or 311C.
  - b. Six hours of coursework in chemistry.
  - c. Six additional hours chosen from astronomy, biology, chemistry, computer applications, computer science, geological sciences, mathematics, physical science, physics, experimental psychology, physical anthropology, physical geography, history of science, and philosophy of science.

Many courses that fulfill this natural science requirement may also be counted toward the science and technology requirements of the core curriculum.

5. Three semester hours of course work that carries a Global Cultures Flag.
6. *Foreign language*: Students must demonstrate proficiency in a single foreign language equivalent to that shown by completion of the second college semester in the language; proficiency is usually shown by earning credit for language courses 506 and 507 or the equivalent. Prospective Texas teachers are strongly encouraged to take Spanish to fulfill the language requirement.



Although the foreign language requirement is the attainment of a certain proficiency rather than the completion of a specified number of hours, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

Students who completed two years of a single foreign language in high school and are not pursuing teacher certification may substitute three courses in specific multicultural and language/communication courses for the foreign language requirement. A list of acceptable substitute courses is available in the Student Dean's Office, George I. Sánchez Building 216, and in the Kinesiology Advising Center, Belmont Hall 1005.

## Major Requirements

All students seeking the Bachelor of Science in Kinesiology and Health must complete the following eighteen-semester-hour core, so that they are exposed to all aspects of the fields of kinesiology and health. Each student then takes a set of courses, called the cognate, that is unique to the major; and either a specialization in the Department of Kinesiology and Health or a minor in another department.

1. Health Education 329K
2. Kinesiology 310
3. Kinesiology 312M
4. Kinesiology 315
5. Three semester hours in Kinesiology 119 or physical education courses. The courses must require substantial physical activity.
6. Kinesiology 347

## Exercise Science

Exercise science majors must complete the following:

1. The Prescribed Work described above, with the following modifications:
  - a. To fulfill the mathematics requirement, exercise science majors must complete Mathematics 408C or 408K. Either course may also be counted toward the mathematics requirement of the core curriculum.
  - b. To fulfill the natural science requirement, exercise science majors must complete Biology 311C, Chemistry 301 and 302, and Physics 302K and 302L. Biology 311C may also be counted toward part I of the science and technology requirement of the core curriculum; either the chemistry or the physics coursework may also be counted toward part II of that requirement.
2. Eighteen semester hours in the cognate in exercise science:
  - a. Kinesiology 321M
  - b. Kinesiology 322
  - c. Kinesiology 324K
  - d. Kinesiology 325K
  - e. Kinesiology 326K
  - f. Kinesiology 336

3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.  
Students planning to attend medical school, physical therapy school, or graduate school in exercise physiology are encouraged to complete the pre-health sciences specialization, to ensure that they complete the science coursework required for admission to those programs.

## Health Promotion

Health promotion majors must complete the following:

1. In place of three semester hours of course work that carries a Global Cultures Flag, students must take Communication Studies 306M.
2. Eighteen semester hours in the cognate in health promotion:
  - a. Health Education 343
  - b. Health Education 370K
  - c. Health Education 371K
  - d. Health Education 373
  - e. Kinesiology 324K
  - f. Kinesiology 325K
3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.  
A student planning a career as a physician, physical therapist, physician assistant, chiropractor, or other health professional is encouraged to complete the pre-health sciences specialization, to ensure that he or she completes the science coursework required for admission to those programs.

## Physical Culture and Sports

Physical culture and sports majors must complete the following:

1. The Prescribed Work, with the following modification to the natural science requirement:
  - a. In place of Biology 301L or 311C: Three hours in one of the fields of study that may be counted toward the science and technology, part II, requirement of the Core Curriculum (p. 22).
  - b. In place of six hours of coursework in chemistry: Six hours in one of the fields of study that may be counted toward the science and technology, part I, requirement of the Core Curriculum. The same field of study may not be used to fulfill both requirement a and requirement b.
  - c. In place of six additional hours of natural science (prescribed work requirement 4c): Three hours of coursework in computer applications.
2. Eighteen semester hours in the cognate in physical culture and sports:
  - a. Kinesiology 349

- b. Six semester hours chosen from Kinesiology 311K, *Sport Psychology*, Kinesiology 348, *Psychological Aspects of Exercise*, and Kinesiology 361, *Coaching Theory and Principles I*.
  - c. Kinesiology 350
  - d. Kinesiology 351
  - e. An additional upper-division course in kinesiology or health education.
3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.

3. Either a specialization in the Department of Kinesiology and Health Education or a minor outside the department; minors consist of fifteen hours of coursework, six of which must be upper-division.

## Applied Movement Science

Students who major in applied movement science must apply for admission to the Professional Development Sequence (PDS) by fall of their junior year. The student's grade point average, completion of prescribed prerequisite coursework, and volunteer and work experiences are factors in the admission decision. Students should see an academic adviser during the first year of coursework to ensure that they understand the application process and the requirements for the PDS.

Applied movement science majors must complete the following:

1. The Prescribed Work (p. 125), with the following modifications:
  - a. To fulfill the mathematics requirement, applied movement science majors must complete Mathematics 305G or a calculus course. Mathematics 305G and some calculus courses may also be counted toward the mathematics requirement of the core curriculum.
  - b. Some of the courses required for the applied movement science major should also be used to meet prescribed work requirements for the BS in Kinesiology and Health; information about these courses is available in the advising offices in George I. Sánchez Building 216 and Bellmont Hall 1005.
2. Twenty-one semester hours in the cognate in applied movement science:
  - a. Three of the following topics of Kinesiology 119: Topic 11: *Rhythmic Activities*; Topic 14: *Tennis*; Topic 15: *Volleyball*; Topic 16: *Social Dance*; Topic 17: *Basketball*; Topic 18: *Adventure Activities*; Topic 19: *Core Body Development*.
  - b. Kinesiology 219T
  - c. Kinesiology 320
  - d. Kinesiology 321M or Kinesiology 334
  - e. Kinesiology 322 or Kinesiology 332 or Kinesiology 338
  - f. Kinesiology 324K
  - g. Kinesiology 127L
  - h. Kinesiology 360
3. Movement competency in two areas in addition to those counted toward requirement 2 above. Students may demonstrate competency by completing two additional topics of Kinesiology 119; these courses do not count toward the degree.
4. Twenty-four hours in the minor in curriculum and instruction. The minor provides the coursework required for all-level physical education teacher certification in Texas.
  - a. Applied Learning and Development 327, *Sociocultural Influences on Learning*. This course is required for admission to the Professional Development Sequence.
  - b. One of the following courses: Psychology 304, *Introduction to Child Psychology*; Educational Psychology 363M (Topic 3: *Adolescent Development*); Human Development and Family Sciences 313, *Child Development*.

## Sport Management

Students who plan to major in sport management must apply for admission to the program. The student's grade point average, volunteer and work experiences, and completion of prescribed prerequisite coursework are factors in the admission decision. Information about admission requirements is available from an academic adviser.

Sport management majors must complete the following:

1. The Prescribed Work described, with the following modifications:
  - a. Sport management majors must complete an economics course to fulfill the second part of the social science requirement.
  - b. In fulfilling the natural science requirement, the student must complete the following:
    - i. In place of Biology 301L or 311C: Three hours in one of the fields of study that may be counted toward the science and technology, part II, requirement of the Core Curriculum (p. 22).
    - ii. In place of six hours of chemistry: Six hours in one of the fields of study that may be counted toward the science and technology, part I, requirement of the Core Curriculum. The same field of study may not be used to fulfill both requirement i and requirement ii.
    - iii. In place of six additional hours of natural science (prescribed work 4c): Three hours in computer applications.
  - c. Communication Studies 306M.
2. Twenty-seven semester hours in the cognate in sport management:
  - a. Kinesiology 316
  - b. Kinesiology 628
  - c. Kinesiology 350
  - d. Kinesiology 353
  - e. Kinesiology 354
  - f. Kinesiology 355
  - g. Kinesiology 356
  - h. Kinesiology 357

- c. Curriculum and Instruction 370E (Topic 21: *Teaching Elementary Physical Education*). Note: This course is required for admission to the Professional Development Sequence.
- d. Curriculum and Instruction 370S (Topic 12: *Kinesiology*).
- e. Curriculum and Instruction 345
- f. Curriculum and Instruction 950W

## Electives

Additional electives may be required to provide the total number of semester hours required for the student's major. No more than twelve semester hours in Kinesiology 127L, 227L, 327L, and 627L may be counted toward the degree.

## Middle Grades, Secondary, and All-Level Teacher Certification

All middle grades (grades four through eight), secondary (grades eight through twelve), and all-level (prekindergarten through grade twelve) teacher certification programs are based on degrees with academic majors in the student's chosen teaching field. Certification requirements for students seeking middle grades, secondary, and all-level teacher certification include all the courses required for the student's major in the College of Education, Fine Arts, Liberal Arts, or Natural Sciences, or the Jackson School of Geosciences, as well as the preprofessional and professional education courses.

Students pursuing middle grades or secondary teacher certification in mathematics, computer science, or science must follow the curriculum prescribed by the UTeach-Natural Sciences program, a collaborative partnership between the College of Education and the College of Natural Sciences. Program advising is housed in the College of Natural Sciences. Information is available at <http://www.uteach.utexas.edu/> and from the College of Natural Sciences Office of Special Projects.

Students pursuing middle grades or secondary teacher certification in English language arts and reading, history, languages other than English, or social studies must follow the curriculum prescribed by the UTeach-Liberal Arts program, a collaborative partnership between the College of Education and the College of Liberal Arts. Program advising is housed in the College of Liberal Arts. Information is available at <http://www.utexas.edu/cola/progs/uteach/> and from the UTeach-Liberal Arts advising office.

Program advising for students seeking all-level certification in art, music, and theatre arts is provided in the College of Fine Arts and in the College of Education.

## Certification Requirements

Information about legal requirements for certification to teach is available from the teacher certification officer, George I. Sánchez Building 216, or from the Texas Education Agency. Application for the certificate should be made at the Certification Office, George I. Sánchez Building 216. State of Texas teacher certification requirements are governed by the Texas Education Agency and are subject to change. Students must adhere to current certification requirements, even if they differ from those listed in a University catalog.

In accordance with state law, the commissioner of education may suspend or revoke a teaching certificate or refuse to issue a teaching certificate for a person who has been convicted of a felony or misdemeanor for a crime that directly relates to the duties and responsibilities of the teaching profession.

Students who have completed all necessary academic requirements for certification must also achieve a passing level of performance on the required state certification examinations. In addition, students seeking bilingual education certification or certification to teach French or Spanish in elementary or secondary school must earn a passing score at the advanced level on the Texas Oral Proficiency Test (TOPT) in the appropriate language.

## Minimum Scholastic Requirements

In addition to meeting the minimum coursework and scholastic requirements for the degree, students seeking middle grades, secondary, and all-level certification must meet other requirements to take the prescribed work in professional development. Admission to the Professional Development Sequence is restricted; information about admission requirements is available in the Office of the Dean, George I. Sánchez Building 216.

## Teaching Fields

All candidates for middle grades, secondary, and all-level teaching certificates must earn a degree in their primary teaching field by meeting all of the requirements for the appropriate major. While completing these requirements, the certification student must take a core set of courses in the major that fulfill certification requirements. This certification core includes at least twenty-four semester hours in a single teaching field or forty-eight semester hours in a composite teaching field, and incorporates the state-specified essential knowledge and skills needed for successful teaching in the field. Often, the student's major department requires more than these twenty-four semester hours, but the certification core in the major field must be taken.

Students seeking middle grades certification may choose from the following teaching fields: English language arts and reading, social studies, mathematics, and science. Students seeking secondary certification may choose from the following teaching fields: science, social studies, computer science, English language arts and reading, history, and mathematics. Students seeking all-level teacher certification may choose from the following teaching fields: art, physical education, languages other than English (Arabic, Chinese, French, German, Japanese, Latin, Russian, or Spanish), music, special education, and theatre arts.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://catalog.utexas.edu/general-information>). In brief, the first digit of a course number indicates the semester hour value of the course.

The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Applied Learning and Development

### Applied Learning and Development: ALD Lower-Division Courses

#### ALD 301C. Freshman Seminar.

Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.

#### ALD 301D. Connecting Research Experience.

Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.

#### ALD 118C, 218C, 318C. Forum Seminar Series.

Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

#### ALD 119, 219, 319, 419, 519, 619. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Applied Learning and Development 119, 219, 319, 419, 519, 619 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

### Upper-Division Courses

#### ALD 320. Cognition, Human Learning, and Motivation.

Current and classical theories concerning conditioning paradigms, learning and remembering, attention, knowledge representation and retrieval, comprehension and production of language, problem solving, and the ways emotion influences learning. Three lecture hours a week for one semester. Prerequisite: Three semester hours of coursework in psychology.

#### ALD 320C. Connecting Research Experience.

Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines

Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.

#### ALD 321. Play in Early Childhood Development.

Theoretical and empirical bases for observing children in play; cognitive, social, and communicative stages related to developmental theory; children's adjustment related to social and emotional theories; motivational value of play. Three lecture hours a week for one semester, with field hours to be arranged. Prerequisite: Three semester hours of coursework in psychology.

#### ALD 322. Individual Differences.

Introduction to individual differences among people through the life span. Examines areas of exceptionality within the context of typical development: current research trends; theoretical and legal considerations; and practice-related issues, including family involvement, cultural and linguistic diversity, and educational perspectives. Orientation to assistive technology. Three lecture hours a week for one semester, with field hours to be arranged. Prerequisite: Three semester hours of coursework in psychology.

#### ALD 323. Language Acquisition.

Language structure; sequence, process, cognitive and social aspects of language acquisition and use; language variation. Three lecture hours a week for one semester. Required for certification in early childhood education. Prerequisite: Three semester hours of coursework in psychology.

#### ALD 324. Literacy Acquisition.

Processes of becoming literate; cognitive insights that move a child to literacy; relationships between reading and writing and among individual characteristics, social factors, and literacy growth. Three lecture hours a week for one semester. This course or Psychology 338K is required for the reading specialization. Prerequisite: Three semester hours of coursework in psychology.

#### ALD 325. Second Language Acquisition.

Acquisition by children or adults of English as a second language. Simultaneous acquisition of two languages, adding a second language, language processing, order of acquisition, role of the first language. Three lecture hours a week for one semester, with field hours to be arranged. Required for certification in bilingual education. Applied Learning and Development 325 and 329 may not both be counted. Prerequisite: Three semester hours of coursework in psychology.

#### ALD 326. Language of Children with and without Disabilities.

Restricted to special education majors. Physiological, prelinguistic, and linguistic components of language; theoretical framework of communication and language development in monolingual and bilingual populations; problems of language development in special populations; language assessment tools. Technological skills component. Three lecture hours a week for one semester. Required for certification in generic special education.

#### ALD 327. Sociocultural Influences on Learning.

Human learning in multisocial, multilingual, and multicultural contexts; realities of society and their impact on learning; social concerns such as prejudice, stereotyping, cross-cultural attitudes, bilingual issues, parent and community involvement. Three lecture hours a week for one semester, with field hours to be arranged. Prerequisite: Three semester hours of coursework in psychology.



### **ALD 328. Applied Human Learning.**

Development, cognition, language, and sociocultural influences in learning contexts; child assessment, identification of learning styles, and tests and measurements. Fieldwork to provide a theoretical basis for professional assessment, referral, and placement. Three lecture hours a week for one semester, with fieldwork to be arranged. Prerequisite: Admission to the professional development sequence of the Bachelor of Science in Applied Learning and Development degree program.

### **ALD 329. Acquisition of Language and Literacies.**

Topics include initial language and literacy acquisition theory; second language acquisition theory; relations among first and additional languages in literacy and language acquisition; home, school, and learners' perspectives; and current issues in literacy and multilingual classrooms. Three lecture hours a week for one semester. Additional fieldwork hours may be required. Required for students seeking certification in early childhood through grade six generalist. Applied Learning and Development 325 and 329 may not both be counted. Prerequisite: Three semester hours of coursework in psychology.

### **ALD 330. Language in Education.**

Theoretical and practical perspectives on the nature of language in education, with a focus on implications for English language learners in classroom settings; linguistic structures and functions; discourse, phonology, morphology, syntax, and semantics across languages and throughout development; and language varieties. Three lecture hours a week for one semester. Additional fieldwork hours may be required. Applied Learning and Development 330 and Curriculum and Instruction 371 (Topic 13: Applied Linguistics and Methods in English as a Second Language) may not both be counted. Prerequisite: Three semester hours of coursework in psychology.

### **ALD 333. Children's Literature.**

For future teachers, an investigation of literature written for children from early childhood through age twelve. Includes an investigation of genres, authors, themes, and forms, and an introduction to ways of bringing literature to children, facilitated by extensive discussion. Three lecture hours a week for one semester, with field hours to be arranged.

### **ALD 179, 279, 379, 479, 579, 679. International Learning Seminars.**

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Applied Learning and Development 179, 279, 379, 479, 579, 679 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

## **Department of Curriculum and Instruction**

Admission to the Professional Development Sequence of upper-division courses for teacher certification requires formal acceptance. Information about admission requirements is available from the Office of the Dean, George I. Sánchez Building 216.

## **Curriculum and Instruction: EDC**

### **Lower-Division Courses**

#### **EDC 101E. Orientation to Teaching in the Elementary School.**

Open to all University students. Discussion sessions and assignments in public schools; designed to help students make teaching career decisions. One discussion hour and three hours of fieldwork a week for one semester. May be repeated for credit.

#### **EDC 101S. Orientation to Teaching in the Secondary School.**

Open to all University students. Discussion sessions and assignments in public schools; designed to help students make teaching career decisions. One discussion hour and three hours of fieldwork a week for one semester. May be repeated for credit.

### **Upper-Division Courses**

#### **EDC 331E. School Organization and Classroom Management in Elementary Schools.**

Administrative structure of elementary schools; concepts, principles, and strategies for establishing an orderly classroom environment, preventing inappropriate behavior, and promoting student involvement in academic work. Three lecture hours a week for one semester, and sixteen to twenty hours of fieldwork a week in an elementary school. Prerequisite: Admission to the professional development sequence of courses, completion of seventy-two semester hours of coursework, and a University grade point average of at least 2.50.

#### **EDC 331S. School Organization and Classroom Management in Secondary Schools.**

Administrative structure of secondary schools; concepts, principles, and strategies for establishing an orderly classroom environment, preventing inappropriate behavior, and promoting student involvement in academic work. Three lecture hours a week for one semester, with at least sixty hours of fieldwork in a secondary school. Prerequisite: Admission to the professional development sequence of courses, completion of seventy-two semester hours of coursework, and a University grade point average of at least 2.50.

#### **EDC 332S. Designs for Instruction.**

One of the beginning courses in the professional development sequence for approved programs in secondary education. Three lecture hours a week for one semester, with a single seven-hour media competency evaluation to be arranged. Prerequisite: Admission to the professional development sequence of courses, completion of seventy-two semester hours of coursework, a University grade point average of at least 2.50, and concurrent enrollment in Curriculum and Instruction 331S.

#### **EDC 333W. Introduction to Teaching.**

Open to all upper-division students. Overview of the objectives, organization, and operation of schools; the teaching process; teaching as a professional career. Two lecture hours and two hours of fieldwork a week for one semester. Prerequisite: Upper-division standing.

#### **EDC 339C. Community Literacy.**

Three lecture hours a week for one semester. Curriculum and Instruction 339C and 371 (Topic 1: Community Literacy) may not both be counted. Prerequisite: Admission to the professional development sequence of courses.

**EDC 339D. Reading Assessment and Development.**

Three lecture hours a week for one semester. Curriculum and Instruction 339D and 371 (Topic 2: Reading Assessment and Development) may not both be counted. Prerequisite: Admission to the professional development sequence of courses.

**EDC 339E. Secondary School Literacy across the Disciplines.**

Designed for students in a University secondary teacher preparation program. Three lecture hours a week for one semester. Curriculum and Instruction 339E and 371 (Topic 10: Secondary School Reading in the Content Subjects) may not both be counted.

**EDC 339F. Adolescent Literacy.**

Designed for students in a University secondary teacher preparation program. Social, political, cultural, emotional, and personal perspectives on adolescent literacy. Subjects may include adolescent literacy practices in and out of school; literacy in relation to identity, peer communities, meaning, communication, and social engagement; curricula that emphasize the social and civic purposes of literacy; and motivation, fulfillment, and democratic participation as educational outcomes. Three lecture hours a week for one semester. Curriculum and Instruction 339F and 371 (Topic 25: Adolescent Literacy) may not both be counted.

**EDC 339G. Literacy Seminar.**

Three lecture hours a week for one semester. Curriculum and Instruction 339G and 371 (Topic: Literacy Seminar) may not both be counted. Prerequisite: Admission to the professional development sequence of courses.

**EDC 340C. Spanish Language Methods for the Bilingual Classroom Teacher I.**

Restricted to bilingual generalist certification students. Designed primarily to help prospective bilingual education teachers expand their oral Spanish proficiency for instructional purposes in the bilingual education classroom. Three lecture hours a week for one semester, with field hours to be arranged. Curriculum and Instruction 340C and 371 (Topic 4: Spanish Language and Methods for the Bilingual Classroom Teacher I) may not both be counted. Prerequisite: Credit or registration for Spanish 611D or 312L.

**EDC 340D. Spanish Language Methods for the Bilingual Classroom Teacher II.**

Restricted to bilingual generalist certification students. Intensive practice in the various aspects and conventions governing literacy within the elementary bilingual education curriculum. Three lecture hours a week for one semester, with field hours to be arranged. Curriculum and Instruction 340D and 371 (Topic 6: Spanish Language and Methods for the Bilingual Classroom Teacher II) may not both be counted. Prerequisite: Curriculum and Instruction 340C, Spanish 611D or 312L, and admission to the professional development sequence of courses.

**EDC 340E. Latino Children's Literature for Bilingual Teachers.**

Restricted to students seeking certification in bilingual generalist. Covers the use of oral and written literature for children in bilingual programs while examining the history and development of Spanish-language children's literature from social, cultural, and political perspectives. Subjects may include foundational books, authors, and illustrators of Latina/o children's literature; criteria for evaluating

culturally authentic children's literature; multimedia and online resources related to bilingual children's literature; and the literary response process. Three lecture hours a week for one semester, with field hours to be arranged. Prerequisite: Knowledge of Spanish and completion of at least thirty-six semester hours of coursework.

**EDC 340F. Foundations of Bilingual Education.**

Restricted to bilingual generalist certification students. An overview of theory, practice, programs, and policy related to bilingual education as implemented in the United States. Designed to give students an opportunity to learn about and discuss issues related to bilingual education, and the education of linguistically and culturally diverse populations. Three lecture hours a week for one semester, with field hours to be arranged. Curriculum and Instruction 340F and 371 (Topic: Foundations of Bilingual Education) may not both be counted.

**EDC 341C. Early Childhood Education.**

Introductory exploration of historical antecedents and social and educational issues in early childhood education; analysis of curricula and behavioral practices in early childhood education; and development of sensitivity to particular needs of early childhood populations. Three lecture hours a week for one semester. Curriculum and Instruction 341C and 371 (Topic 7: Early Childhood Education) may not both be counted.

**EDC 341D. Early Childhood Program Development.**

Preparation for developing appropriate curricula for early childhood education classrooms, including the contexts of curriculum decision making (community, state, culture, and politics); developmentally-appropriate practice and classroom environments; bases for selecting materials; and frameworks for reflecting on decisions. Three lecture hours a week for one semester. Curriculum and Instruction 341D and 371 (Topic 8: Early Childhood Program Development) may not both be counted.

**EDC 343. Informal Science Education.**

Three lecture hours and one three-hour field laboratory a week for one semester, with one four-hour Saturday field trip to be arranged. Curriculum and Instruction 343 and 371 (Topic 3: Informal Science Education) may not both be counted. Prerequisite: Upper-division standing, six semester hours of coursework in science, or consent of instructor.

**EDC 344. Digital Literacy for Teaching and Learning.**

Use of digital tools to increase technical, pedagogical, and administrative proficiencies in a series of hands-on laboratory projects involving word-processing, handling of databases and spreadsheets, multimedia presentations, digital image and video editing, web page creation, and tools to create digital storytelling, e-portfolios, and electronic gradebooks. Experiential foundation creates a repertoire of possibilities for content-specific, technology-supported teaching and learning associated with learner-centered, collaborative classrooms. Emphasis on the development of critical perspectives (including pedagogical, social, technical, cultural, ethical, economic, legal, and political) to help youth fully participate in digital learning. Three lecture hours a week for one semester. Curriculum and Instruction 344 and 371 (Topic 15: Computing Tools for Educators) may not both be counted.

**EDC 345. Curriculum Issues in Physical Education.**

Study of personal teaching and physical education programs. Accompanies student teaching. Three lecture hours a week for one semester. Curriculum and Instruction 345 and 371 (Topic 26:

Curriculum Issues in Physical Education) may not both be counted. Prerequisite: A major in applied movement science, admission to the professional development sequence of courses, and concurrent enrollment in Curriculum and Instruction 950W.

### **EDC 350. Topics in Educational Studies.**

Analysis of selected topics and problems in education. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **EDC 350E, 650E, 950E. Elementary Grade Teaching Practicum.**

Supervised practicum in early childhood through grade four classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

### **EDC 350M, 650M, 950M. Middle Grade Teaching Practicum.**

Supervised practicum in middle grade classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Some sections are offered on the pass/fail basis only and some sections are offered on the letter-grade basis only; consult the Course Schedule. No more than nine semester hours of this course may be taken for credit. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

### **EDC 350S, 650S, 950S. Secondary School Teaching Practicum.**

Supervised practicum in secondary classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Some sections are offered on the pass/fail basis only and some sections are offered on the letter-grade basis only; consult the Course Schedule. No more than nine semester hours of this course may be taken for credit. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

### **EDC 350W, 650W, 950W. All-Level Teaching Practicum.**

Supervised practicum in elementary, middle school, and secondary classroom teaching. Conducted in cooperating schools as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

### **EDC 364, 664. Internship.**

Supervised fieldwork or clinical work in the student's area of study. For 364, at least one conference hour and six hours of fieldwork a week for one semester; for 664, at least one conference hour and twelve hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Consent of instructor.

### **EDC 365C. Knowing and Learning in Math and Science.**

Same as UTeach-Natural Sciences 350. Restricted to students in the UTeach-Natural Sciences program. Psychological foundations of learning; problem solving in mathematics and science education utilizing technology; principles of expertise and novice understanding of subject matter; implications of high-stakes testing; and foundations of formative and summative assessment. Three lecture hours a week for one semester; additional hours may be required. Only one of the following may be counted: Curriculum and Instruction 365C, 371 (Topic 21: Knowing and Learning in Math and Science), UTeach-Natural Sciences 350. Prerequisite: Credit with a grade of at least C- or registration for UTeach-Natural Sciences 101.

### **EDC 365D. Classroom Interactions.**

Same as UTeach-Natural Sciences 355. Restricted to students in the UTeach-Natural Sciences program. Principles of delivering effective instruction in various formats (lecture, lab activity, collaborative settings); examination of gender, class, race, and culture in mathematics and science education; overview of policy related to mathematics and science education. Three lecture hours a week for one semester; additional hours may be required. Only one of the following may be counted: Curriculum and Instruction 365D, 371 (Topic 20: Classroom Interactions), UTeach-Natural Sciences 355. Prerequisite: A University grade point average of at least 2.50, Curriculum and Instruction 365C or UTeach-Natural Sciences 350 with a grade of at least C-, and UTeach-Natural Sciences 110 with a grade of at least C-.

### **EDC 365E. Project-Based Instruction.**

Same as UTeach-Natural Sciences 360. Restricted to students in the UTeach-Natural Sciences program who have earned a passing score on the preliminary portfolio. Foundations of project-based, case-based, and problem-based learning environments; principles of project-based curriculum development in mathematics and science education; classroom management and organization of project-based learning classrooms. Three lecture hours a week for one semester with additional fieldwork hours to be arranged. Only one of the following may be counted: Curriculum and Instruction 365E, 371 (Topic 22: Project-Based Instruction), UTeach-Natural Sciences 360. Prerequisite: A University grade point average of at least 2.50, and Curriculum and Instruction 365D or UTeach-Natural Sciences 355 with a grade of at least C-.

### **EDC 370E. Elementary School Subjects.**

Curriculum content and organization, teaching procedures, materials, and research in elementary school subjects. Three lecture hours a week for one semester, including field hours in elementary schools. May be repeated for credit when the topics vary. Prerequisite: A University grade point average of at least 2.50.

**Topic 1: Reading.** Additional prerequisite: Admission to the professional development sequence of courses.

**Topic 2: Language Arts.** Additional prerequisite: Admission to the professional development sequence of courses.

**Topic 3: Science.** Additional prerequisite: Admission to the professional development sequence of courses.

**Topic 4: Social Studies.** Additional prerequisite: Admission to the professional development sequence of courses.

**Topic 5: Mathematics.** Additional prerequisite: Mathematics 316L or consent of the mathematics education faculty; and admission to the professional development sequence of courses.

**Topic 15: Special Adaptations for the Deaf.**

**Topic 19: Reading/Language Arts.** Additional prerequisite: Admission to the professional development sequence of courses.

**Topic 20: Teaching English as a Second Language.** The methods, teaching strategies, and materials for developing and assessing English language proficiency in culturally and linguistically diverse populations within the context of the elementary school curriculum.

**Topic 21: Kinesiology.**

### **EDC 370S. Secondary School Subjects.**

Curriculum content and organization, teaching procedures, materials, and research in one secondary school subject. Three lecture hours a week for one semester. The topic in the appropriate field is required for secondary school teacher certification. May be repeated for credit when the topics vary. Prerequisite: Admission to the professional development sequence of courses, completion of ninety semester hours of coursework, and six semester hours of upper-division coursework in the appropriate subject; additional prerequisites vary with the topic.

**Topic 1: Advanced Methods in English, Language Arts, and Reading.** Restricted to students in a secondary teacher preparation program in the Department of Curriculum and Instruction.

**Topic 3: Advanced Methods in Social Studies.** Restricted to students in a secondary teacher preparation program in the department of Curriculum and Instruction.

**Topic 5: Advanced Methods in Foreign Language.** Restricted to students in a secondary teacher preparation program in the Department of Curriculum and Instruction.

**Topic 7: Art.** Additional prerequisite: Curriculum and Instruction 331S and 332S.

**Topic 8: Music (Vocal).** Additional prerequisite: Curriculum and Instruction 331S and 332S.

**Topic 9: Music (Instrumental).** Additional prerequisite: Curriculum and Instruction 331S and 332S.

**Topic 10: Drama.** Additional prerequisite: Curriculum and Instruction 331S and 332S.

**Topic 11: Speech.** Additional prerequisite: Consent of instructor.

**Topic 12: Teaching Secondary Physical Education.**

### **EDC 370W. All-Level School Subjects.**

Curriculum content and organization; teaching procedures, materials, and research in one school subject at all grade levels. Three lecture hours a week for one semester. The topic in the appropriate field is required for all-level school teacher certification. May be repeated for credit when the topics vary. Prerequisite: Admission to the professional development sequence of courses.

**Topic 1: English as a Second Language.**

**Topic 2: Art.**

**Topic 3: Music.**

**Topic 4: Theatre.**

**Topic 5: Foreign Language Education.**

### **EDC 371G. Teaching Young Children.**

Designed to provide students with frameworks for observing and interacting with young children in classroom settings, and to acquaint students with the teacher's varied roles in early childhood classrooms. Topics include cultural and linguistic diversity; supervising and interacting with children in a range of instructional groupings, including center-based and play-based learning activities and whole-group experiences; planning and implementing appropriate practices and strategies; and record-keeping and assessment. Three lecture hours a week for one semester, and twelve to sixteen hours of fieldwork a week in a public school. Curriculum and Instruction 371 (Topic 19: Guiding Young Children in Groups) and 371G may not both be

counted. Prerequisite: Upper-division standing, twelve semester hours of upper-division coursework in education, or consent of the education adviser; and admission to the professional development sequence of courses and a University grade point average of at least 2.50.

### **EDC 371R. Reading Difficulties.**

Reading theory, assessment, materials, and instruction with emphasis on struggling readers; field experiences in reading tutoring. Three lecture hours a week for one semester with additional field hours to be arranged. Curriculum and Instruction 371 (Topic 24: Reading Difficulties) and 371R may not both be counted. Prerequisite: Upper-division standing, twelve semester hours of upper-division coursework in education, or consent of the education adviser; and admission to the professional development sequence of courses and a University grade point average of at least 2.50.

### **EDC 373. African Americans in Sports.**

Theoretical and practical complexities in issues surrounding African Americans in sports, including the relationship between athletics and higher education. Focuses on racial stereotyping, identity theory, and how practical knowledge of these theories can aid in understanding the current state of athletics. Three lecture hours a week for one semester.

### **EDC 377. Conference Course in Curriculum and Instruction.**

Independent studies in instructional methodology and curriculum. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

## **Department of Educational Psychology**

### **Educational Psychology: EDP**

#### **Lower-Division Courses**

#### **EDP 110, 210, 310. Introduction to Educational Psychology.**

An elective course open to lower-division students in any division of the University. Principles of psychology, human development, learning, and teaching. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1 (TCCN: EDUC 1300, PSYC 1300): Individual Learning Skills.**

**Topic 2: Selected Topics.**

**Topic 3: Intergroup Dialogue.** Group discussion of the definitions and implications of social identities. Topics may include gender, race, ethnicity, religion, sexual orientation, physical ability, and age.

#### **EDP 312. Lower-Division Seminar.**

Issues and research in various areas of educational psychology and the behavioral sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

**Topic 1: Issues and Debates in Life Development.** Restricted to students in the Longhorn Scholars Program. Additional prerequisite: Consent of the School of Undergraduate Studies.



## Upper-Division Courses

### EDP 332. Psychological Foundations of Education.

Scientific contributions to the understanding of human behavior and educational processes: cultural influences, processes of learning and socialization, classroom management, development, intellectual functioning, and educational achievement. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### EDP 162, 262, 362. The Individual and Education.

Frames of reference for studying human behavior, self-concepts and individual attributes, individual and cultural nature of human learning, societal impacts on the individual personality, individualization of guidance and teaching. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may be required for some topics; these are given in the Course Schedule.

**Topic 1: Emergent Views of Intelligent Behavior.**

**Topic 2: Early Childhood.**

**Topic 3: Selected Topics.**

**Topic 4: Mexican Americans in the Schooling Process.**

Educational Psychology 362 is same as Mexican American Studies 374 (Topic 8: Mexican Americans in the Schooling Process).

**Topic 5: Chicano Educational Struggles.** Educational Psychology 362 (Topic 5) is same as Mexican American Studies 374 (Topic 25: Chicano Educational Struggles).

**Topic 6: Psychology of Race and Racism.** Educational Psychology 362 (Topic 6) is same as African and African Diaspora Studies 372D (Topic 1: Psychology of Race and Racism). Only one of the following may be counted: African and African Diaspora 374D (Topic 8: Psychology of Race and Racism), 372D (Topic 1), Curriculum and Instruction 362 (Topic 6).

**Topic 7: Educational Disabilities in Schools.**

**Topic 8: Mindfulness, Compassion, and the Self.** Designed to give students firsthand experiential knowledge of mindfulness and compassion. Subjects include self-compassion, well-being, and self-concept. Additional prerequisite: Psychology 301 or consent of instructor.

### EDP 362T. Tests and Measurements.

Fundamental psychometric concepts; educational and psychological measurement instruments; constructing, administering, scoring, and interpreting tests for educational and individual evaluation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Tests and Measurements--Elementary.**

**Topic 2: Tests and Measurements--Secondary.**

**Topic 3: Tests and Measurements--Reading.**

**Topic 4: Tests and Measurements--Elementary/Secondary/Reading.**

### EDP 363. Personality and Behavior.

Selected approaches to the study of the dynamics of behavior, its antecedents and its appraisal. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Psychology 301 or another introductory behavioral science course.

**Topic 1: Selected Topics.**

**Topic 2: Personality Development.**

**Topic 3: Human Sexuality.**

**Topic 4: Dynamics of Interpersonal Communication.**

**Topic 5: Emotional and Behavioral Disorders.**

**Topic 6: Forensic Psychology: Psychological Issues in Legal Contexts.** Designed to familiarize students with various psychological roles and influences in the courtroom; case law as related to expert testimony; ethical practice in forensic psychology; and psychological testing and assessment procedures used and considered best practice in various forensic contexts.

### EDP 363M. Personality and Mental Health.

Exposition of theories of personality, research literature on mental health and character development, applications of principles and theories to the educative enterprise; applications of personality theory to the guidance of children and youth. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in education or other behavioral sciences.

**Topic 1: Character Development.**

**Topic 2: School Promotion of Mental Health.**

**Topic 3: Adolescent Development.** Addresses contemporary adolescent development in relation to major transitions, contextual influences, and psychosocial tasks, with additional emphases on aspects of adolescent identity development. Application to education and teaching adolescents is stressed.

**Topic 4: Life Span Adjustment.**

**Topic 5: Life Span Development of Black Women.** The psychological and social issues that affect the life span development of Black women. Discusses issues such as socioeconomic status, political climate, social norms, gender and ethnic identity, mental health, family dynamics, academic achievement, and social adjustment. Additional prerequisite: Psychology 301 or another introductory behavioral science course.

### EDP 367. Studies in Counseling and Psychotherapy.

Nature of the counseling process, dynamics of behavior change, client-counselor roles and relationships; an experiencing of the group process as a basis for studying dynamics of individual and group behavior. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of ninety semester hours of coursework, twelve semester hours of upper-division coursework in behavioral sciences, and consent of instructor.

**Topic 1: Introduction to Individual Counseling and Psychotherapy.**

**Topic 2: A Multicultural Approach to Counseling and Psychotherapy.** Major theories of counseling, client-counselor roles and relationships, history and development of multicultural counseling as an area of study, cultural competency, and the impact of culture on the counseling process.

**Topic 3: Substance Abuse Counseling and Theories.** Studies in biological mechanisms of categories of commonly abused substances and treatment approaches to addiction. Includes discussion of other forms of addiction, including food, sex, and internet, and addiction in diverse populations.

### EDP 169K, 269K, 369K, 469K. Upper-Division Seminar.

Issues and research in various areas of educational psychology and the behavioral sciences examined in relation to human development. One, two, three, or four lecture hours a week for one semester. Some topics are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in education or other behavioral sciences, and consent of instructor.

**Topic 1: Career Planning.** Additional laboratory hour to be arranged.

**Topic 2: Resident Assistant Development.**

**Topic 3: Students and Community Involvement.**

**Topic 4: Selected Topics.**

**Topic 5: Greek Leadership Issues.** Designed to facilitate development of leaders within University sororities and fraternities. Includes leadership skills development in areas such as academics, risk management, social justice, and community service. Additional prerequisite: Consent of the Office of the Dean of Students.

**Topic 6: Minority Student Leadership Issues.**

**Topic 7: Socially Responsible and Ethical Student Leadership.** Additional prerequisite: Consent of the Office of the Dean of Students.

**Topic 8: Training Procedures in Intergroup Dialogue.**

Designed to develop the foundational skills and knowledge required to facilitate discussions in a culturally diverse group, particularly intergroup dialogues. Topics include social identity and group development; prejudice and stereotyping; intergroup communication; conflict intervention; and community-building techniques.

**Topic 9: Practicum in Facilitating Intergroup Dialogue.**

Additional prerequisite: Consent of the Office of the Dean of Students.

**Topic 10: Educational Neuroscience.** Explores the interactions between neurobiological processes and education, examining how cognitive neuroscience can inform and guide educational practice, as well as how the impact of the educational experience on brain development and functioning can increase understanding of functional neural systems.

### **EDP 371. Introduction to Statistics.**

Measures of central tendency and variability; correlation and regression; probability and statistical inference; analysis of variance; nonparametric statistics. Three lecture hours a week for one semester.

### **EDP 379L. Problems in Educational Psychology.**

Supervised individual research on selected problems in educational psychology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Educational Psychology 310 or another introductory behavioral science course.

## **Department of Kinesiology and Health Education**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Health Education: HED**

#### **Upper-Division Courses**

#### **HED 127L, 227L, 327L, 627L. Fieldwork in Health Promotion.**

Applied experiences in development, delivery, or evaluation of professional health promotion programs. For 127L, one conference hour and two hours of fieldwork a week for one semester; for 227L, one conference hour and five hours of fieldwork a week for one semester; for 327L, one conference hour and eight hours of fieldwork a

week for one semester; for 627L, one conference hour and seventeen hours of fieldwork a week for one semester. No more than twelve semester hours in the following courses may be counted: Health Education 127L, 227L, 327L, 627L, Kinesiology 127L, 227L, 327L, 627L. Prerequisite: Upper-division standing, consent of the director of the degree program in kinesiology, and a University grade point average of at least 2.50. A higher grade point average may be required.

#### **HED 628. Internship in Health Promotion.**

Applied experiences in development, delivery, or evaluation of professional health promotion programs. One conference hour and seventeen hours of fieldwork a week for one semester. May be repeated once for credit. Prerequisite: Upper-division standing, consent of the director of the degree program in kinesiology, and a University grade point average of at least 2.50. A higher grade point average may be required.

#### **HED 329K. Child, Adolescent, and Adult Health.**

Restricted to students in the College of Education. The foundations of child, adolescent, and adult health; health education; and the biological, environmental, and behavioral health determinants of health. Includes the application of evidence-based child, adolescent, and adult health promotion concepts; prominent health risk behaviors established during youth that increase the risk of morbidity and mortality; and the application of personal health and wellness information. Three lecture hours a week for one semester. Only one of the following may be counted: Health Education 329, 329K, Kinesiology 333.

#### **HED 335. Theories of Substance Use and Abuse.**

An introduction to the psychological, social, pharmacological, and cultural aspects of substance use and abuse. Includes a study and critique of the theories of substance use and abuse. Three lecture hours a week for one semester. Health Education 335 and Kinesiology 367 may not both be counted.

#### **HED 343. Foundations of Epidemiology.**

Designed to familiarize students with the basic tenets of epidemiology, as well as to provide an introduction to the different types of epidemiological study designs. Three lecture hours a week for one semester. Health Education 343 and Kinesiology 377 may not both be counted. Prerequisite: Consent of instructor.

#### **HED 352K. Studies in Health: Topical Studies.**

Analysis and synthesis of the literature and discussion of current and specific issues in health. Three lecture hours a week for one semester. Laboratory work is required for some topics; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Psychosocial Issues in Women's Health.** Psychosocial issues in women's physical and mental health. Includes a broad definition of women's health that considers traditional reproductive issues, disorders that are more common in women than in men, and the leading causes of death in women. Covers gender influences on health risk behaviors, and societal influences on women's health through a consideration of social norms and roles. Health Education 352K (Topic 2) and Kinesiology 352K (Topic 7: Psychosocial Issues in Women's Health) may not both be counted.

**Topic 3: Psychosocial Issues in Adult Development and Health.** Examines psychosocial issues in adult physical and mental health within the context of adult psychological development, using a biopsychosocial approach. Examines psychosocial factors in

the major health risks in adulthood and in preventative health behavior. Also considers psychosocial factors in stress and coping and their implications for health. Health Education 352K (Topic 3) and Kinesiology 352K (Topic 16: Psychosocial Issues in Adult Development and Health) may not both be counted.

### **HED 366. Human Sexuality.**

Analysis of the physiological, psychological, and social factors in human sexuality. Three lecture hours a week for one semester. Health Education 366 and Kinesiology 366 may not both be counted.

### **HED 370K. Topical Seminar in Health Promotion.**

Identification, causes, incidence, prevention, control, and social implications of major problems in health. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Foundations of Health Promotion I.** Introduction to the field of health promotion, as applicable in the fields of health and education: theories, processes, activities, and settings for health promotion practice. Health Education 370K (Topic 1) and Kinesiology 370K (Topic 2: Introduction to Health Promotion) may not both be counted.

**Topic 2: Adolescent Health Risk Behavior.** Overview of the biological, psychological, social, and environmental determinants of adolescent risk-taking behavior. Risk behaviors of interest will include outcomes stemming from unintentional injuries, intentional injuries (self injury, suicide), tobacco use, alcohol and other drug use, diet, sedentary behavior, and pathological gambling. Health Education 370K (Topic 2) and Kinesiology 370K (Topic 3: Adolescent Health Risk Behavior) may not both be counted.

**Topic 3: Environmental Health.** Provides an introduction to the key areas of environmental health in developed and developing countries. Using the perspectives of the population and community, the course will cover factors associated with the development of environmental health problems.

### **HED 371K. Foundations of Health Promotion II.**

Introduction to the processes of planning, implementing, and evaluating health promotion programs. Three lecture hours a week for one semester. Only one of the following may be counted: Health Education 352K (Topic 1: Foundations of Health Promotion II), 371K, Kinesiology 352K (Topic 14: Techniques of Health Promotion). Prerequisite: Upper-division standing and Health Education 370K (Topic 1: Foundations of Health Promotion I).

### **HED 373. Evaluation and Research Design.**

Research methods and program evaluations in health promotion settings. Topics include types of experimental and non-experimental research, validity, reliability, experimental and quasi-experimental research designs, data collection procedures, measurement of health knowledge, attitudes and behaviors, data analysis, and the presentation of results. Three lecture hours a week for one semester. Health Education 373 and Kinesiology 373 may not both be counted.

### **HED 178C, 278C, 378C, 678C. Fieldwork in Health.**

Undergraduate research and/or experience with a health agency in the field attempting to analyze or solve community health problems through education; students are supervised by the health agency and by the kinesiology and health education faculty. For each semester hour of credit earned, two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Offered on the pass/

fail basis only. Prerequisite: Upper-division standing and consent of instructor.

## **Kinesiology: KIN**

### **Lower-Division Courses**

#### **KIN 310. Physiological Basis of Conditioning.**

Analysis and discussion of current issues and theories of physical conditioning. Three lecture hours a week for one semester. Only one of the following may be counted: Kinesiology 310, 339, 352K (Topic 2: Physiological Basis of Conditioning).

#### **KIN 311K. Sport Psychology.**

The psychological response to sport-related stress and the influence of psychological variables on sport performance and coaching. Three lecture hours a week for one semester.

#### **KIN 312. Issues in Kinesiology: Topical Studies.**

Analysis and discussion of current issues within the discipline of kinesiology. Three lecture hours a week for one semester. Additional hours may be required for some topics; these are identified in the Course Schedule. May be repeated for credit when the topics vary.

**Topic 2 (TCCN: PHED 2356): Care and Prevention of Athletic Injuries.** Principles of athletic training, including mechanisms, signs and symptoms, treatments, and basic rehabilitation of athletic injuries and illnesses. Three lecture hours and one laboratory/discussion hour a week for one semester.

**Topic 3: Fundamentals of Coaching.** An introduction to the principles and practices of coaching as they relate to the integration of sports science, practice structure and design, and the development of a coaching philosophy. Involves group work and field experience with youth athletic organizations. Prerequisite: Kinesiology 316.

**Topic 4: Philosophy and Leadership in Sport & Physical Activity.**

#### **KIN 312G. Golf Instruction.**

Designed to train students to teach the game of golf. Three lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Consent of instructor.

#### **KIN 312M. Management of Physical Activity and Sport Programs.**

Introductory survey of the field of sport management. Examines various types of sport organizations and introduces the student to practices in marketing, management, sport law, and basic finance. Includes sport-specific management challenges, particularly events and facilities, and considerations for the future, such as social issues. Three lecture hours a week for one semester.

#### **KIN 213. Safety Information and Procedures.**

Factors affecting human safety; techniques and procedures to promote and ensure safe living. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1 (TCCN: PHED 1206): First Aid.**

**Topic 2: Water Safety Instruction.** Restricted to Kinesiology and Health Education majors; open to others with consent of instructor. Trains instructor candidates to teach courses in swimming and water safety by developing their understanding of how to use the course materials, conduct training sessions and evaluate

participants' progress. Students will be introduced to several swimming strokes, springboard diving, cardiovascular conditioning, exercise physiology, nutrition, personal safety. Elementary rescue skills and basic snorkeling techniques. Culminates in American Red Cross certification. Prerequisite: swimming proficiency and confidence in deep water.

**Topic 3: Lifeguarding.**

**Topic 4: Lifeguarding Instruction.**

### **KIN 314 (TCCN: PHED 1331). Children's Movement.**

Introduction to children's movement, physical activity, and fitness; professional standards, policy, and legislation; physiological principles and learning principles. Movement skills and appropriate teaching strategies to provide future teachers with the knowledge and skills to provide and support positive, effective physical education classes for children. Three lecture hours and three laboratory hours a week for one semester, including off-campus observation of children's movement programs. Prerequisite: Fifteen semester hours of college coursework.

### **KIN 315. Motor Learning.**

Psychological factors affecting performance and acquisition of motor skills. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Psychology 301.

### **KIN 316. Structure and Organization of Sport Programs.**

Introduction to sport management and effective organizational behavior for sport programs. Analysis of the dynamic management process necessary for the improvement of organizational productivity. Three lecture hours a week for one semester. May be repeated once for credit.

### **KIN 217. Advanced Scuba Diving Leadership.**

Designed to prepare experienced scuba divers to instruct, organize, and conduct safe, appropriate-level dives for certified divers. Also designed to prepare students to apply for certification as a National Association of Underwater Instructors (NAUI) Assistant Instructor or Divemaster. Three lecture or open-water hours a week, and three internship hours a week for one semester participating in the training of entry-level students. Prerequisite: Certification as a scuba rescue diver and as a National Association of Underwater Instructor (NAUI) Master Scuba Diver, or equivalent knowledge and experience.

### **KIN 119. Movement Competence.**

Acquisition and knowledge of techniques, with emphasis on learning mechanical and perceptual principles, rules, strategy, and officiating. The equivalent of three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: A major or minor in the Department of Kinesiology and Health Education.

**Topic 1: Archery.**

**Topic 2: Ballet.**

**Topic 3: Bowling.**

**Topic 4: Diving.**

**Topic 5: Fencing.**

**Topic 6: Golf.**

**Topic 7: Scuba Diving.**

**Topic 8: Swimming.** Designed for kinesiology and health education majors. Development of swimming techniques including instruction in seven swimming strokes, springboard diving, cardiovascular conditioning, exercise physiology concepts, nutrition, personal safety, elementary rescue skills, CPR/AED and basic snorkeling techniques. Provides preparation for American Red Cross

certification. Additional prerequisite: Comfortable in deep water and able to swim two lengths using two strokes, or consent of instructor.

**Topic 10: Conditioning.** Basic principles involved in designing a sound conditioning program emphasizing resistance training techniques. Additional Prerequisite: Physical Education 106C (Topic 7: Weight Training), or consent of instructor.

**Topic 11: Rhythmic Activities and Dance.** Designed for applied movement science majors, and kinesiology and health education majors. Introduces a variety of movement and dance activities that can be used to teach rhythm to youth.

**Topic 12: Gymnastics.**

**Topic 13: Manipulative Activities.**

**Topic 14: Tennis.** Introduction to methods, progressions, strategies, and teaching cues appropriate for playing, teaching, and coaching basic tennis.

**Topic 15: Volleyball.** Introduction to methods, progressions, and teaching cues appropriate for playing, teaching, and coaching basic volleyball.

**Topic 16: Social Dance.** Designed for applied movement science majors, and kinesiology and health education majors. Introduction to popular social partner dances such as swing, waltz, tango, two-step and more. Emphasis on connecting with a dance partner and the art of both leading and following. Optional dance labs for additional practice are offered.

**Topic 17: Basketball.** Designed for applied movement science majors, and kinesiology and health education majors. Introduces methods, progressions, strategies and teaching cues appropriate for playing, teaching, and coaching basic basketball.

**Topic 18: Adventure Activities.** Includes basic skills needed to participate in outdoor/adventure activities. Participants will learn methods, progressions, drills, and performance cues appropriate for participating in and leading outdoor/adventure activities. Includes off-campus activities. Additional prerequisite: Kinesiology 119 (Topic 8: Swimming) and lifeguard, water safety instructor, or swimming level II certification.

**Topic 19: Kinesthetic Awareness and Core Body Development.**

Introduces basic movement skills from simple to more complex, and how they relate to more advanced sport skills through developmental gymnastics, yoga, Pilates, and martial arts. Additional prerequisite: A major in applied movement science.

### **KIN 219D. Movement Analysis: Dual Activities.**

Application of biomechanics and motor learning principles to the analysis of selected movement activities, with particular emphasis on dual sports. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: A major in applied movement science.

### **KIN 219G. Advanced Golf.**

Designed for the advanced golfer. Includes technical swing analysis and instruction, course management and course play, and tournament play. Two lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Consent of instructor, and a certified Professional Golfers Association (PGA) handicap of 15 or below or equivalent proficiency.

### **KIN 219K. Athletics.**

Knowledge and skills required for officials, coaches, and athletic trainers of interschool sports. Two lecture hours and two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Coaching.**

**Topic 2: Officiating.**



**Topic 3: Introduction to Athletic Training.** An introduction to athletic training principles and theories, including the prevention, recognition, and management of athletic injuries and illnesses. Includes basic skill development in areas such as first aid, emergency care, and supportive taping, wrapping, and bracing. Requires a one-day first aid and CPR workshop.

#### **KIN 219S. Movement Analysis: Individual Activities.**

Restricted to kinesiology and health education majors. Application of movement skill analysis and biomechanical principles, physical laws of movement, fitness training principles and programs, exercise physiology, performance techniques, and skill progressions in individual activities and sport. Two lecture hours and one laboratory hour a week for one semester.

#### **KIN 219T. Movement Analysis: Team Activities.**

Restricted to kinesiology and health education majors. Application of scientific and psychosocial aspects of team sports, basic mechanical principles, and basic progressions relevant to performing and teaching selected team sport skills. Students also learn basic strategies and tasks related to coaching and organizing a team. Two lecture hours and one laboratory hour a week for one semester.

### **Upper-Division Courses**

#### **KIN 320. Applied Biomechanics of Human Movement.**

Designed to provide students with an understanding of applied scientific analysis of movement. Examines the physiological, structural, and mechanical bases for human movement, with examples drawn from sport and rehabilitation. Lectures concentrate on a scientific approach to mechanisms underlying human movement and to strategies and practices of clinical and sport applications. Laboratory sessions focus on both theoretical and applied aspects of selected mechanical concepts. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Kinesiology 324K, and Mathematics 305G or the equivalent.

#### **KIN 321M. Motor Development and Performance.**

Development of fundamental motor patterns and skills from birth to adolescence; factors that influence motor skill development, such as growth, maturation, and neural and physiological mechanisms. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing.

#### **KIN 322. Diagnosis and Evaluation of Fitness.**

Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Kinesiology 310, 324K, and 325K.

#### **KIN 324K. Applied Human Anatomy.**

Combines the study of systematic and regional human anatomy. Includes applications of the skeletal system, and attachments and actions of muscles, with an emphasis on the mechanics of support and motion and their clinical applications. Two lecture hours and three laboratory hours a week for one semester. Biology 478L and Kinesiology 324K may not both be counted.

#### **KIN 325K. Physiology of Exercise.**

Application of principles of physiology to muscular activities. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Kinesiology 324K or a course in human physiology.

#### **KIN 226. Advanced Weight Training.**

Explores various advanced techniques of weight training, with emphasis on the lifts used in the competitive strength sports of weightlifting and powerlifting. Includes plyometrics and functional training movements for athletic enhancement. Two lecture hours a week for one semester.

#### **KIN 326K. Kinesiology: Biomechanical Analysis of Movement.**

Study of the principles of equilibrium, force, and motion as applied to human movement. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Kinesiology 324K, Mathematics 408C, and Physics 302K.

#### **KIN 127L, 227L, 327L, 627L. Fieldwork.**

Supervised fieldwork or clinical work in appropriate activities. For 127L, one conference hour and two hours of fieldwork a week for one semester; for 227L, one conference hour and five hours of fieldwork a week for one semester; for 327L, one conference hour and eight hours of fieldwork a week for one semester; for 627L, one conference hour and seventeen hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in this course may be counted. No more than twelve semester hours in the following courses may be counted: Health Education 127L, 227L, 327L, 627L, Kinesiology 127L, 227L, 327L, 627L. No more than twelve semester hours in the following courses may be counted: Kinesiology 127L, 227L, 327L, 627L, 628. Students taking Kinesiology 127L, 227L, or 327L as an elective outside the major must register on the pass/fail basis; those using it to fulfill a degree requirement must register on the letter-grade basis; those taking it as an elective within the major may register on either the pass/fail or the letter-grade basis. Prerequisite: Upper-division standing, consent of the director of the degree program in kinesiology, and a University grade point average of at least 2.50. A higher grade point average may be required. Students will be dropped from the course if they have not obtained the director's consent in advance.

**Topic 3: Aiding in Fitness Leadership.**

**Topic 4: Fieldwork in Kinesiology.**

**Topic 5: Personal Training.**

**Topic 6: Clinical Exercise Testing.**

**Topic 8: Teaching Physical Education.** Introduction to the mission and standards for quality physical education. Designed to aid in career choice and the opportunity to experience teaching with master teachers in the school. Includes off-campus instruction with physical education teachers in elementary and secondary school physical education programs.

**Topic 9: Sensory Motor Integration.** Students participate in The Autism Project (TAP) to explore evidence-based practices and service learning options used with children and adults on the autism spectrum. Additional prerequisite: Consent of instructor.

**Topic 10: Laboratory Research in Kinesiology.**

#### **KIN 628. Fieldwork in Sport Management.**

Twenty-seven hours of fieldwork a week for one semester. May be repeated once for credit. No more than twelve semester hours in the following courses may be counted: Kinesiology 127L, 227L, 327L, 627L, 628. Prerequisite: Upper-division standing, a University grade point average of at least 2.50, completion of an online test, and consent of the faculty adviser.

**KIN 330E. Sport Nutrition.**

The nutritional needs of people whose physical activity ranges from recreational to elite competitive athletics. Development of practical dietary strategies based upon understanding how macronutrients, vitamins, minerals, and water are digested and absorbed for metabolism. Three lecture hours a week for one semester. Kinesiology 330E and 352K (Topic 13: Sport Nutrition) may not both be counted. Prerequisite: Upper-division standing, and Chemistry 314N or a course in human physiology.

**KIN 331. Physical Aging in America.**

Three lecture hours a week for one semester. Kinesiology 331 and 352K (Topic: Physical Aging in America) may not both be counted. Prerequisite: Upper-division standing; Kinesiology 310, 315, or 325K; and six additional semester hours of coursework in kinesiology.

**KIN 332. Techniques of Fitness Leadership.**

Practical application of theoretical content from exercise physiology, anatomy, and biomechanics. Emphasis on program design and development for healthy adults and special populations. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Kinesiology 332 and 352K (Topic 12: Techniques of Fitness Leadership) may not both be counted. Prerequisite: Kinesiology 310 or 325K.

**KIN 334. Children's Exercise and Physical Activity.**

Children's changing capacity for performance in exercise and sport. Includes performance changes as a function of physical growth and maturation, physiological response to activity and training, the relationship between children's health and adult health, and the psychosocial parameters that influence participation in physical activity. Three lecture hours a week for one semester. Kinesiology 334 and 352K (Topic 8: Children's Exercise and Physical Activity) may not both be counted. Prerequisite: Kinesiology 310.

**KIN 336. Neuromuscular Control.**

Central and peripheral nervous system control of human muscular contractions and limb movement. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Kinesiology 324K, or a course in human physiology.

**KIN 338. Motor Development and Assessment.**

Training in screening, diagnostic, and programmatic motor assessment instruments. Designed to give students practical experience in assessing physical and motoric development in children with and without disabilities. Three lecture hours a week for one semester. Kinesiology 338 and 352K (Topic 9: Motor Development: Assessment) may not both be counted. Prerequisite: Kinesiology 321M; Kinesiology 360 is recommended.

**KIN 340. Modern Olympic Movement in World Affairs.**

Examination of the place of the modern Olympic movement in world affairs. The cultural, political, and economic dynamics of this relationship will receive special emphasis.

**KIN 140C. Practicum in Athletic Training: Level 1A.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, and immediate care of injuries and illnesses suffered by athletic and physically active populations. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction

of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140D. Practicum in Athletic Training: Level 1B.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, and treatment of injuries and illnesses suffered by athletic and physically active populations. Emphasizes the application of therapeutic modalities and soft-tissue therapy techniques. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140E. Practicum in Athletic Training: Level 2A.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, and diagnosis of injuries and illnesses suffered by athletic and physically active populations. Emphasizes clinical evaluation and assessment techniques. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140F. Practicum in Athletic Training: Level 2B.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes therapeutic exercise and rehabilitation procedures. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140G. Practicum in Athletic Training: Level 3A.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes general medical conditions. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140J. Practicum in Athletic Training: Level 3B.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes the administrative and professional aspects of managing these conditions. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of education competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

### **KIN 341. Therapeutic Modalities in Athletic Training.**

The study and practice of using therapeutic modalities, including soft tissue and manual therapy techniques, to treat athletic injuries. Covers physiological effects, indications, contraindications, protocols, injury pathology, and tissue healing. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 341 and 352K (Topic 19: Therapeutic Modalities in Athletic Training) may not both be counted. Prerequisite: Kinesiology 312 (Topic 2: Care and Prevention of Athletic Injuries), or consent of instructor.

### **KIN 342. Clinical Evaluation of Athletic Injuries in the Lower Body.**

The study and practice of techniques involved in the evaluation of athletic injuries affecting the lower body. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 342 and 352K (Topic 22: Clinical Evaluation of Athletic Injuries in the Lower Body) may not both be counted. Prerequisite: Kinesiology 312 (Topic 2: Care and Prevention of Athletic Injuries) and 324K, and concurrent enrollment in Kinesiology 343; or consent of instructor.

### **KIN 343. Clinical Evaluation of Athletic Injuries in the Upper Body.**

The study and practice of techniques involved in the evaluation of athletic injuries affecting the upper body. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 343 and 352K (Topic 15: Clinical Evaluation of Athletic Injuries in the Upper Body) may not both be counted. Prerequisite: Kinesiology 312 (Topic 2: Care and Prevention of Athletic Injuries) and 324K, and concurrent enrollment in Kinesiology 342; or consent of instructor.

### **KIN 344. Therapeutic Exercise and Rehabilitation Techniques.**

The study and practice of therapeutic exercise techniques and rehabilitation protocols in treating athletic injuries and illnesses. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 344 and 352K (Topic 24: Advanced Athletic Training: Therapeutic Exercise and Rehabilitation) may not both be counted. Prerequisite: Kinesiology 324K and 342, or consent of instructor; credit or registration for Kinesiology 119 (Topic 10: Conditioning) and 226 or 363.

### **KIN 345. Topics in Athletic Training.**

Presentations, including some by medical and allied medical specialists, covering topics in athletic training and sports medicine. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 345 and 352K (Topic 20: Topics in Athletic Training) may not both be counted. Prerequisite: Consent of instructor.

### **KIN 346. Athletic Training Program Administration.**

The study of organizational and administrative principles involved with athletic training programs. Includes legal issues, budgetary concerns, and policies and procedures. Also includes resume development and career planning. Three lecture hours a week for one semester. Kinesiology 346 and 352K (Topic 21: Athletic Training Program Administration) may not both be counted. Prerequisite: Kinesiology 219K (Topic 3: Introduction to Athletic Training), 341, 342, and 344; or consent of instructor.

### **KIN 347. Historical and Ethical Issues in Physical Culture and Sports.**

Designed to provide an overview of the historical antecedents of the modern fitness movement and examine the intellectual and social

motivations involved in the pursuit of health and physical fitness. Explores the history of sport science, how laboratory revelations lead to new fitness regimens, and ethical issues in the field of physical culture and sport, such as the use of ergogenic drugs, the social consequences of high performance sport, and professional ethics in the fields of kinesiology and health education. Three lecture hours a week for one semester.

### **KIN 348. Psychological Aspects of Exercise.**

Examines both the psychological benefits that accrue from exercise, such as reduced depression and stress, as well as the psychological predictors of exercise adherence. Three lecture hours a week for one semester. Kinesiology 348 and 352K (Topic 17: Psychological Aspects of Exercise) may not both be counted.

### **KIN 349. History of Sport and Physical Activity.**

Significant developments in sport and physical activity since prehistoric time; emphasis on events influencing contemporary American programs and the International Olympic Games. Three lecture hours a week for one semester. Kinesiology 330 and 349 may not both be counted. Prerequisite: Upper-division standing.

### **KIN 350. Sociological Aspects of Sport and Physical Activity.**

Three lecture hours a week for one semester. Kinesiology 350 and 352K (Topic: Sociological Aspects of Sport and Physical Activity) may not both be counted.

### **KIN 351. Philosophy of Sport and Physical Activity.**

Designed to introduce the student to the ideas and methodologies of the philosophic exploration of play, sport, athletics, exercise, and the body. Emphasis on the study of sport and ethics. Three lecture hours a week for one semester. Kinesiology 329 and 351 may not both be counted. Prerequisite: Upper-division standing.

### **KIN 352K. Studies in Human Movement: Topical Studies.**

Analysis and synthesis of the literature and discussion of current and specific issues in kinesiology. Three lecture hours a week for one semester. Laboratory work is required for some topics; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Women and Sport.** Same as Women's and Gender Studies 345 (Topic 5: Women and Sport).

**Topic 5: Sport, Fitness, and Mass Media.** Same as American Studies 322 (Topic 3: Sport, Fitness, and Mass Media).

**Topic 6: Race and Sport in African American Life.** Same as African and African Diaspora Studies 374 (Topic 27: Race and Sport in African American Life) and Anthropology 324L (Topic 26: Race and Sport in African American Life). Prerequisite: Upper-division standing.

### **KIN 353. Sport Law.**

Introduces the legal principles applicable to a variety of sport settings. Topics include tort liability, with a special emphasis on the effective management of risk; and constitutional law issues, focusing on the individual rights of amateur athletes and employees in sport organizations. Three lecture hours a week for one semester. Kinesiology 352K (Topic 25: Sport and Law) and 353 may not both be counted.



**KIN 354. Sport and Event Marketing.**

Application of the fundamental principles used in the marketing of sport and events. An introduction to service quality for increasing customer satisfaction and effectiveness of sport organizations. Three lecture hours a week for one semester. Kinesiology 352K (Topic 11: Sport and Event Promotion) and 354 may not both be counted.

**KIN 355. Media and Public Relations in Sport.**

Examination and application of the concepts of public and media relations to sport and leisure organizations. Topics include effective interpersonal communication, persuasion, media relations, publicity tactics, and writing and oral communications skills. Three lecture hours a week for one semester. Kinesiology 352K (Topic 26: Media and Public Relations in Sport) and 355 may not both be counted.

**KIN 356. Revenue and Budgeting in Sport.**

Introduction to financial analysis and budgeting techniques in the context of sport organizations; conventional and innovative methods for the acquisition of revenue available to sport organizations. Three lecture hours a week for one semester. Kinesiology 352K (Topic 10: Revenue and Budgeting in Sport) and 356 may not both be counted.

**KIN 357. Strategic Management of Sport Organizations.**

Examination of management and service delivery systems in sport organizations. Designed to develop specific knowledge and management skills in the areas of human resources, events, facilities, and risk management. Three lecture hours a week for one semester. Kinesiology 352K (Topic 4: Management of Sport and Health Promotion Programs) and 357 may not both be counted. Prerequisite: Kinesiology 354 and 356.

**KIN 360. Programming for People with Disabilities.**

Restricted to students with a major or minor in the Department of Kinesiology and Health Education. Designed for Applied Movement Science majors. Course investigates programming options for people with disabilities in the area of sport, recreation, and community involvement. Three lecture hours a week for one semester, with additional field observation hours to be arranged. Prerequisite: Six semester hours of coursework in kinesiology, or consent of instructor.

**KIN 361. Coaching Theory and Principles I.**

Examines the philosophy, ethics, strategies, motivational techniques, performance analysis, program organization, contest administration, and facilities management related to coaching. Three lecture hours a week for one semester. Kinesiology 352 and 361 may not both be counted.

**KIN 362. Coaching Theory and Principles II.**

Examines the process of becoming a successful coach and developing a coaching protocol for a specific sport. Three lecture hours a week for one semester. Kinesiology 352 and 362 may not both be counted.

**KIN 363. Theory and Practice in Strength Coaching.**

Explores the physiology and biomechanics of strength training and conditioning, as well as popular assessment protocols and exercise prescription principles. Additional areas include the organization and administration of a strength/conditioning facility, staff utilization, integration of weight training with other training techniques, and other standard strength coaching practices. Three lecture hours a week for one semester.

**KIN 364. Aquatic Facility Operator: Management and Administration.**

Designed to prepare the aquatic professional for leadership in the management of indoor and outdoor facilities. Includes aquatic facility operation, administration of programs, physical operations, policies and procedures, and staff development and training. Includes design, pool operation, water chemistry, facility management, safety procedures and risk management, budgeting, and marketing aquatic programs. Studies educational, sport, and recreational aspects of pools, lakes, camps, and beachfronts. Three lecture hours a week for one semester.

**KIN 365. The Business of Golf.**

Restricted to students in the College of Education. Designed for students pursuing a career in the golf business. Includes clubhouse and links management, sales, agronomy, technology, and equipment. Three lecture hours a week for one semester.

**KIN 370K. Topical Seminar in Health Promotion.**

Identification, causes, incidence, prevention, control, and social implications of major problems in health. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Emergency Medical Technology.****KIN 375. Issues and Trends in Developmental Movement Programs.**

Introduction to issues related to the goals, organization, and success of developmental movement programs, such as school physical education, youth sports, YMCA, and other recreation programs and community activities. Issues include equity, competition, fitness, social development, safety and liability, and sportsmanship. Involves group work and observation and involvement in community programs. Two lecture hours and three laboratory hours a week for one semester.

**KIN 376. Measurement in Kinesiology.**

Measurement and assessment procedures; application of statistical procedures; standards for authentic assessment; measurement/assessment selection and evaluation; use of technology in tracking development of motor skills and fitness. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in kinesiology.

**KIN 178, 278, 378, 478, 578, 678, 778, 878, 978. Fieldwork in Health.**

Undergraduate research and/or experience with a health agency in the field attempting to analyze or solve community health problems through education; supervision by the health agency and by the kinesiology and health education faculty. For each semester hour of credit earned, two laboratory hours a week for one semester. Some topics are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**Topic 1: Substance Abuse Prevention I.****Topic 2: Substance Abuse Prevention II.****Topic 3: Sexual Health I.**

**Topic 4: Substance Abuse Prevention III.** Offered on the letter-grade basis only.



### **KIN 379H. Honors Tutorial Course.**

Readings or a research project, under the supervision of a faculty member, in specific areas of research within kinesiology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: A University grade point average of at least 3.00 and consent of instructor.

## **Physical Education: PED**

### **Lower-Division Courses**

#### **PED 101J. Swimming.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Swimming I.** For nonswimmers. Elementary physical and mental adjustments, four basic strokes, water safety.
- Topic 2: Beginning Swimming II.** For well-adjusted but weak swimmers. Five basic strokes, elementary diving, water safety.
- Topic 3: Intermediate Swimming.** For the average swimmer. Six power strokes, diving, water safety, introduction to conditioning.
- Topic 5: Stroke Technique and Fitness Swimming.**

#### **PED 102G (TCN: PHED 1151, PHED 1152). Skin Diving and Scuba Diving.**

Training in underwater safety, skin and scuba skills, care of equipment. Culminates in PADI certification. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Advanced-level swimming skills. Strong swimming and survival skills required.

- Topic 1: Basic Scuba Diving.** Classroom, pool, and open water training with emphasis on underwater safety, the skills of skin and scuba diving, equipment, the underwater environment, planning for a dive. Culminates in nationally recognized certification.
- Topic 2: Intermediate Scuba Diving.** Open to divers with Basic Certification. Classroom, pool, and open water training with emphasis on navigation, air consumption, emergency procedures, night dives. Culminates in nationally recognized certification.
- Topic 3: Advanced Scuba Diving.** Open to experienced divers with Intermediate Certification. Classroom, pool, and open water training with emphasis on deep dives, mapping, search and research diving, equipment rescue work. Culminates in nationally recognized certification.

#### **PED 103L. Social Dance.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

- Topic 1: Beginning Social Dance.** Introduction to popular social partner dances, including swing, waltz, two-step, salsa, tango and more. Emphasis on connecting with a dance partner and the art of leading and following. May not be counted by students with credit for Kinesiology 119.
- Topic 2: Intermediate Social Dance.** An intermediate survey of popular social dances. Includes new dance styles and more advanced partnering skills. Prerequisite: Kinesiology 119 (Topic 16: Social Dance) or Physical Education 103L (Topic 1).
- Topic 3: Advanced Social Dance.** Designed for the advanced dancer. Includes advanced partnering in familiar and new dance styles, movement analysis and dance critique, role reversal and teaching techniques, and history of social dance. Prerequisite:

Physical Education 103L (Topic 2: Intermediate Social Dance), and audition on first class meeting.

#### **PED 104P. Tennis.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Tennis.** For the nonplayer.
- Topic 2: Advanced Beginning Tennis.** For players with weak strokes and serves.
- Topic 3: Intermediate Tennis.** Prerequisite: A steady stroke and consistent serve.
- Topic 4: Advanced Intermediate Tennis.** Prerequisite: Skilled all-court play.
- Topic 5: Advanced Tennis.** Prerequisite: Competence for tournament play.

#### **PED 104R. Racquetball.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Racquetball.** For the nonplayer.
- Topic 2: Intermediate Racquetball.** Prerequisite: Racquetball experience.
- Topic 3: Advanced Racquetball.** Prerequisite: Competence for tournament play.

#### **PED 105C. Handball.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Handball.** For the nonplayer.
- Topic 2: Intermediate Handball.** Prerequisite: Handball experience.
- Topic 3: Advanced Handball.** Prerequisite: Competence for tournament play.
- Topic 4: Handball Doubles.** Prerequisite: Handball experience.

#### **PED 105M. Fencing.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Fencing: Foil.**
- Topic 2: Beginning Fencing: Epee.**
- Topic 3: Intermediate Fencing: Foil.** Prerequisite: Physical Education 105M (Topic 1).
- Topic 4: Intermediate Fencing: Epee.** Prerequisite: Physical Education 105M (Topic 2).
- Topic 5: Intermediate Fencing: Saber.** Prerequisite: Physical Education 105M (Topic 1).
- Topic 6: Advanced Fencing: Foil.** Prerequisite: Any intermediate-level fencing course.

#### **PED 105R. Karate/Tae Kwon Do.**

Includes self-defense. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Karate/Tae Kwon Do.** Prerequisite: No experience required.
- Topic 2: Intermediate Karate/Tae Kwon Do.** Prerequisite: Karate experience.
- Topic 3: Advanced Karate/Tae Kwon Do.** Prerequisite: Competence for tournament play.

### **PED 105T. Judo.**

Includes self-defense. Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Judo.** No experience required.
- Topic 2: Intermediate Judo.** Prerequisite: Judo experience.
- Topic 3: Advanced Judo.** Prerequisite: Competence for tournament play.

### **PED 106C. Conditioning.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Swim Conditioning.**
- Topic 2: Cardiovascular and Weight Training.**
- Topic 3: Aerobic Walking.**
- Topic 4: Aerobics.**
- Topic 5: Body Works.**
- Topic 6: Circuit Aerobics.**
- Topic 7: Weight Training.**
- Topic 8: Running.**

### **PED 107C. Archery.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Archery.** Basic form.
- Topic 2: Intermediate Archery.** Bow mechanics and competition. Prerequisite: Archery experience.
- Topic 3: Intermediate Field Archery.** Prerequisite: Archery experience.
- Topic 4: Advanced Archery.** Tournament shooting and psychology of competition. Prerequisite: Intermediate-level archery skills or 225 FITA average.

### **PED 107D. Golf.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Golf.**
- Topic 2: Intermediate Golf.** Prerequisite: One semester of beginning golf or an eighteen-hole scoring average of eighty to one hundred.

### **PED 107L. Gymnastics.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Tumbling and Trampoline.**
- Topic 2: Intermediate Tumbling and Trampoline.** Prerequisite: Tumbling and trampoline experience.
- Topic 3: Rhythmic Gymnastics.** Combination of gymnastics and dance movements performed to music using the hand apparatus of balls, hoops, ribbons, or ropes.
- Topic 4: Beginning Gymnastics I.** Apparatus work in either men's or women's Olympic gymnastics events.
- Topic 5: Beginning Gymnastics II.** Apparatus work in either men's or women's Olympic gymnastics events. Prerequisite: Limited gymnastics experience.
- Topic 6: Intermediate Gymnastics.** Apparatus work in either men's or women's Olympic gymnastics events. Prerequisite: Gymnastics experience.

**Topic 7: Intermediate Advanced Gymnastics.** Apparatus work in either men's or women's Olympic gymnastics events. Intense activity. Prerequisite: Gymnastics experience.

**Topic 8: Advanced Gymnastics.** Apparatus work in either men's or women's Olympic gymnastics events. Intense activity. Prerequisite: Intermediate-level gymnastics experience.

### **PED 108C. Basketball.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Basketball.** For those with little or no basketball experience.
- Topic 2: Intermediate Basketball.** For those with some skills in the game.
- Topic 3: Advanced Basketball.** For those with high skill and some competitive experience.

### **PED 108J. Power Volleyball.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Power Volleyball.** For those with few or no volleyball skills.
- Topic 2: Intermediate Power Volleyball.** For those with good basic skills: bump, set, spike, serve.
- Topic 3: Advanced Power Volleyball.** For those with high skills and knowledge of multiple offenses.

### **PED 108S. Softball.**

Three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

- Topic 1: Beginning Softball.** For those with few softball skills.
- Topic 2: Intermediate Softball.** For those with experience and good basic skills.

## **Science: SCI**

### **Science: SCI**

#### **Upper-Division Courses**

##### **SCI 360. Seminar on Recent Advances in Science.**

Recent advances in the life, earth/space, and physical sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For certified teachers, a bachelor's degree or consent of instructor; for others, six semester hours of coursework in science, in the biological sciences, in one of the physical sciences, or in one of the earth/space sciences, or consent of instructor.

- Topic 1: Life Science.**
- Topic 2: Earth Science.**
- Topic 3: Physical Science.**
- Topic 4: Physics by Inquiry.**

# Special Education: SED

## Special Education: SED

### Upper-Division Courses

#### **SED 332. Field Experiences in Special Education.**

Observation and participation in a variety of educational settings that serve children with disabilities. Two lecture hours and two four-hour sessions of fieldwork a week for one semester. Fieldwork sessions must be arranged between 8:00 AM and noon. Required for all undergraduate students seeking special education certification.

#### **SED 337. Intercultural Communication and Collaboration.**

Basic principles of interpersonal and intergroup communication in culturally and linguistically diverse educational settings. Designed to help students understand the relationship between culture, language, and disability using a variety of formats, including discussion, dialogue, journals, simulations, case studies, and field-based assignments. Three lecture hours a week for one semester. Required for undergraduate students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

#### **SED 360, 660, 960. Apprenticeship: Research to Practice.**

Supervised practicum in special education classroom teaching, conducted in cooperating schools, as part of the teacher preparation program. Consists of teaching, analysis, and evaluation. Two lecture hours and at least fifteen, thirty, or forty-five hours of fieldwork a week for one semester. Required for undergraduate students seeking special education certification. Offered on the pass/fail basis only. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

#### **SED 366. Behavior Management for the Exceptional Learner.**

Behavior management procedures used in a variety of educational environments with a wide range of learners. Emphasis on instructional procedures, behavior and program evaluation, and principles of applied behavior analysis. Instructional management, classroom management, functional assessment of behavior, procedures for increasing successful school behavior while decreasing undesirable behavior, social skills instruction, and crisis management. Three lecture hours and two one-hour field placement sessions a week for one semester. Required for students seeking special education certification. Prerequisite: Applied Learning and Development 322 and consent of the undergraduate adviser.

#### **SED 667. Student Teaching in Special Education.**

Directed and closely supervised performance in the full range of duties of a teacher, conducted in cooperating schools; accompanying directed study and seminars. Required in the professional development sequence for elementary school teacher candidates also seeking special education certification. Forty hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Completion of the twenty-four hours of coursework required for the special education academic specialization; consent of the undergraduate adviser; and admission to the professional development sequence of courses. Admission by application only, filed in the Office of Student Field Experiences by March 1 for fall semester registration and by October 1 for spring semester registration.

#### **SED 372. Assessment of Individuals with Mild to Moderate Disabilities.**

Assessment and high-stakes testing policies, procedures, and practices in special education; curriculum-based measurement used to monitor academic outcomes for students with disabilities; and principles and procedures used to reduce misidentification of individuals from culturally and linguistically diverse backgrounds and with limited English proficiency. Assessment data and individualized education plan development is also covered. Three lecture hours a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

#### **SED 675. Instructional Methods in Special Education.**

Procedures and practice in the instruction of students with mild or moderate exceptionalities. Emphasis on adaptations within the regular classroom and methods specific to exceptionalities. Three lecture hours a week for one semester, and six hours a week in an internship. Required for students seeking special education certification. Prerequisite: Applied Learning and Development 322, Special Education 376, and consent of the undergraduate adviser.

#### **SED 375C. Teaching Individuals with Mild to Moderate Disabilities.**

Instructional practices associated with improved outcomes for students with mild to moderate disabilities receiving services in general and special education classrooms, including an emphasis on teaching reading in content areas, such as mathematics, science, and social studies. Three lecture hours and sixteen to twenty internship hours a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

#### **SED 376. Foundations and Issues in Special Education.**

Key issues affecting decision-making and practices by special education teachers, assessment personnel, and administrators related to the treatment and education of students with disabilities. Three lecture hours a week for one semester. Required for students seeking special education certification.

#### **SED 377. Transition and the Exceptional Learner.**

An overview of the transitions within the life span, particularly the transition to postsecondary school settings for individuals with disabilities. Designed to help students develop the ability to infuse transition-related topics into curricula, assess transition needs, develop transition plans, and become knowledgeable about existing vocational and community services. Three lecture hours a week for one semester, with fieldwork to be arranged. Required for students seeking special education certification. Prerequisite: Applied Learning and Development 322 and consent of the undergraduate adviser.

#### **SED 378D. Assessment Practices in Autism and Developmental Disabilities.**

Assessment practices for developing and evaluating educational programs for individuals with autism and developmental disabilities. Considers the theoretical orientations that underlie the major assessment strategies, including standardized, behavioral, and informal practices. Three lecture hours and three hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher

preparation program and consent of the Office of Student Field Experiences.

**SED 378E. Advanced Early Childhood Intervention.**

Designed to assist students in acquiring in-depth knowledge of early childhood intervention, particularly related to services within the state of Texas, including an understanding of the legal policies related to serving young children with disabilities and their families. Three lecture hours and eight hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

**SED 378R. Reading Assessment and Development with Diverse Populations.**

The knowledge and skills associated with assessing, instructing, and monitoring the progress of students who experience mild to moderate difficulties with reading, as well as students with dyslexia. The emphasis is on reading, spelling, and writing for kindergarten through grade five. Three lecture hours and four hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

**SED 378S. Teaching Individuals with Autism and Developmental Disabilities.**

Assessment and instructional strategies for educating students with autism and other developmental and physical disabilities. Focuses on implementation and evaluation of instructional procedures for teaching a range of adaptive behaviors, such as self-care, and communication, social, and community living skills. Three lecture hours and eight hours of fieldwork a week for one semester. Required for students seeking special education certification. Prerequisite: Admission to the teacher preparation program and consent of the Office of Student Field Experiences.

**SED 378T. Topics in Special Education.**

Three lecture hours and three and one-half hours of fieldwork a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Language-Minority Students in Special Education.**

Prerequisite: Applied Learning and Development 322.

**SED 379. Seminar in Special Education.**

Specialized study in an identified area of interest in education of the exceptional child. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Applied Learning and Development 322 and consent of the undergraduate adviser.



# Cockrell School of Engineering

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Gregory L. Fenves, *PhD, PE, Dean*  
Gerald E. Speitel Jr., *PhD, PE, Associate Dean for Academic Affairs*  
John C. Halton III, *MA, Associate  
Dean for School and Alumni Relations*  
John G. Ekerdt, *PhD, PE, Associate Dean for Research*  
Patricia A. Gore, *MEd, Assistant Dean for Student Affairs*  
Wesley G. Queen, *BBA, Assistant Dean for Business Affairs*  
<http://www.engr.utexas.edu/>

## General Information

### Mission

The mission of the Cockrell School of Engineering is to achieve excellence in undergraduate and graduate education, research, and public service. The school strives to provide an educational experience that inspires students to reach for the highest levels of intellectual attainment and personal growth throughout their lives, to provide a scholarly and professional environment that enables students and faculty members to make lasting contributions to the advancement of knowledge and the creative practice of engineering, to engage in service that enhances the public's understanding of technology and facilitates the use of technology for the betterment of society, and to lead the nation in providing equality of opportunity for engineering education.

Engineering education affords individuals the opportunity to prepare themselves for life in an era when human well-being depends more than ever before on the ability to apply technology for the benefit of society. It has become clear that in producing the goods and services demanded by an expanding population, we must consider the effects of technology on the environment. Solution of many of the problems faced by society today will involve a high level of technology.

Engineers are involved with all the devices and systems made by and for people—buildings and factories, transportation and communication systems, equipment for generating and distributing electrical energy, computers and electronic devices; indeed, all of the manufactured products we see around us. Engineers of diverse backgrounds working together and with other professionals have produced heart pumps, surgical lasers, robotics for manufacturing and construction, polymers, safer and more efficient nuclear reactors, advances in space research and in environmental protection, safe and attractive bridges, satellites and telecommunication systems, and small but powerful computers. Just as much of the technology being applied today has been developed within the past ten years, the solution of tomorrow's problems will require the development of new technology through engineering research.

In addition to its traditional function of giving men and women the opportunity to prepare for careers as professional engineers, the Cockrell School of Engineering also has a second function: providing the opportunity to acquire a technical background to students who plan to continue their education in areas such as business, public affairs, law, medicine, and scientific disciplines related to engineering. The engineering faculty willingly accepts its obligation to enhance cooperation between engineers and others working to improve the quality of life.

The school is organized into academic departments that offer a variety of degrees. Although there are distinct differences among the degree

programs, they have much in common; all are based on a foundation of mathematics, natural sciences, and basic engineering subjects. Following the development of an adequate foundation during the first two years, an engineering student begins concentrated study in a particular area. During the senior year the student delves into practical engineering problems, developing skills in defining a problem, translating available information into equations that can be analyzed logically, creating additional information when necessary, and choosing a course of action that has a reasonable chance of producing the desired results.

The school seeks to give students the knowledge necessary to take advantage of opportunities in a number of areas. The engineer who begins a professional career immediately following graduation usually will find opportunity for a variety of responsible positions in industry and government. The first assignments usually are of a technical nature. Later, one may choose to become a technical specialist or to move into positions involving administration and management. Either choice can lead to a rewarding professional career.

Many engineering graduates elect to continue their education. Studies by the American Society for Engineering Education indicate that nearly 50 percent of all engineering graduates eventually earn a master's degree. Most do their graduate work in engineering, either in a professional program where advanced design techniques are emphasized or in a graduate school where the emphasis is on research. Others elect to enroll in graduate programs in other disciplines. The flexibility to accommodate a broad spectrum of educational objectives has been incorporated into the degree structure of the Cockrell School of Engineering through technical area options and electives that permit students to define programs of study that best suit their needs.

### History

The Department of Engineering was established in 1884, an outgrowth of work in applied mathematics first offered in the Department of Literature, Science, and Arts. About 1920, the department became a college; in 2007, the college was renamed the Cockrell School of Engineering in honor of Ernest Cockrell Jr., an alumnus and benefactor of the University. The first degree in engineering, a Bachelor of Science with a major in civil engineering, was conferred in 1888. Civil engineering degrees have been conferred since 1894 and electrical engineering degrees since 1896.

Degrees in architecture were conferred in the College of Engineering from 1909 through 1951, when the School of Architecture became an autonomous division of the University. Degrees in chemical engineering have been conferred since 1916; degrees in mechanical engineering since 1919; degrees in architectural engineering since 1928; degrees in petroleum engineering since 1931; degrees in aeronautical engineering from 1943 to 1959 and in aerospace engineering since 1960; degrees in ceramic engineering from 1948 to 1961; degrees in meteorology from 1951 to 1963; degrees in geosystems engineering and hydrogeology, offered jointly with the College of Natural Sciences, since 1996; and undergraduate degrees in biomedical engineering beginning in 2002. A degree in engineering science was offered from 1960 until 1988.

### Facilities

The Cockrell School occupies six buildings on the central campus, with a total of 927,000 square feet for classrooms, laboratories, and offices. The Nuclear Engineering Teaching Laboratory and a substantial number of other engineering research laboratory facilities are housed

at the J. J. Pickle Research Campus, about six miles north of the central campus.

## Libraries

University libraries include Perry-Castañeda Library (social sciences and humanities), Mallet Chemistry Library, Kuehne Physics Math Astronomy Library, Life Science Library, and Walter Geology Library. The units together make up one of the largest academic libraries in the United States, with more than six million volumes covering almost all fields of academic and scientific research.

The Richard W. McKinney Engineering Library, a branch of the University Libraries located in Ernest Cockrell Jr. Hall (ECJ), supports teaching and research in all fields offered by the school. Extensive facilities are available for electronic retrieval of technical literature at <http://www.lib.utexas.edu/>. Special resources, such as the online Ask a Librarian, access to selected industry standards, several information tutorials, and US patent and trademark searching are available at <http://www.lib.utexas.edu/engin/>.

All units of the University Libraries offer reference services, circulation and reserve, access to electronic information, and interlibrary loan services.

## Financial Assistance through the School Engineering Scholarship Program

The Engineering Scholarship Program recognizes students in the Cockrell School of Engineering with scholarship awards based primarily on merit and leadership. To be considered for engineering scholarships, future students should complete the scholarship section of the University's ApplyTexas admission application by December 1st, marking engineering as their first-choice major.

Current engineering students should complete their online Engineering Scholarship Application by February 1st each year to be considered for scholarship awards from the Cockrell School and from their department for the following year. Additional information, including current scholarship listings, awardee instructions and links to external scholarship resources is available at <http://www.engr.utexas.edu/undergraduate/scholarships>.

## Student Services

### Office of Student Affairs

The mission of the Office of Student Affairs (SAO) is to serve the University and the public by helping to recruit, retain, and graduate engineering students. The office aims to accomplish this mission by providing personal and responsive guidance and support throughout each student's University experience. The staff strives to provide a foundation for students to develop successful lives, careers, and long-term relationships with the Cockrell School of Engineering and the University of Texas at Austin.

The SAO represents the Office of the Dean in all student matters. Academic advisers help students, staff, and faculty navigate the policies and procedures of the Cockrell School and the University. Students may seek assistance in person in ECJ 2.200, by phone at (512) 471-4321, or by e-mail to [student-affairs@engr.utexas.edu](mailto:student-affairs@engr.utexas.edu). The SAO also provides information online at <http://www.engr.utexas.edu/undergraduate/services/>.

## Advising

### Academic Advising

There are several offices within the Cockrell School that work together to provide the engineering student with academic advising services. It is the engineering student's responsibility to be aware of these services and to take advantage of them. Faculty, departmental, and SAO academic advisers are available throughout the year to discuss matters that affect the student's academic progress toward degree completion.

To facilitate movement through an academic program, each engineering student must be advised in his or her major department before registering for each semester or summer session. Each student should review his or her audit every semester through IDA, the University's Interactive Degree Audit system. The advising audit lists the courses remaining in the student's degree plan and the requirements the student has not yet fulfilled. It normally provides an accurate statement of requirements, but the student is responsible for knowing the exact requirements for the degree as stated in a catalog under which he or she is entitled to graduate.

### Counseling and Referral Services

The Office of Student Affairs advises and counsels students about problems or concerns they have about their academic work or life in the school.

In addition, University counseling services are available from the Counseling and Mental Health Center, the Telephone Counseling Service, the UT Learning Center, and University Health Services. These offices are described in *General Information*.

## Student Organizations and Programs

### Engineering Foundation

In 1955, the University of Texas System Board of Regents authorized establishment of the Engineering Foundation Advisory Council (renamed the Engineering Advisory Board in 2007) to promote academic excellence in engineering education. Since then, with the board's leadership, the Cockrell School of Engineering has received generous support from individuals and corporations to develop programs of excellence. This philanthropy supports academic and leadership programs for students, scholarships for undergraduate students, fellowships for graduate students, facility development, and faculty support in the forms of endowed chairs and professorships, fellowships, and innovations in teaching and research. The Cockrell School's development staff encourages gifts to the school through its Friends of Alec annual giving program, the establishment of endowments, estate planning, and the fostering of long-lasting relationships with alumni, friends, and corporate partners.

### Engineering Student Life

Founded in 1999 at the request of engineering student leaders, Engineering Student Life (ESL) was the first office of its kind in an academic unit at the University of Texas at Austin. Many of its programs and procedures have served as role models for UT Austin and other universities across the United States. ESL programs provide a wide variety of opportunities outside the classroom for Cockrell School students to develop skills in leadership, teamwork, communications and ethics, as well as involve engineering students in the Cockrell School community. Among these programs are Gone to Engineering, Ramshorn Retreats, and LeaderShape-Texas. In addition, ESL is the Cockrell School's primary liaison to the over

seventy engineering student organizations. These organizations are generally student chapters of national professional engineering organizations, and ESL works with them on leadership development, programming, team building, and budgeting.

More information about Engineering Student Life, its programs, and engineering student organizations is available online at <http://www.engr.utexas.edu/studentlife/> and in ECJ 1.224.

## Equal Opportunity in Engineering (EOE) Program

The Equal Opportunity in Engineering (EOE) Program invites students to become part of an exciting community that focuses on academic success and personal growth. EOE initiatives such as the Fall Kick-Off, First-Year Interest Groups (FIGs), and Engineering Peer Leaders help students establish a strong academic foundation and promote the formation of a peer support network. In addition, EOE provides students with access to tutoring, undergraduate research opportunities through the Texas Research Experience (TREX) program, and professional development workshops. In partnership with Pi Sigma Pi Minority Academic Engineering Society, the National Society of Black Engineers, and the Society of Hispanic Professional Engineers, the EOE Program builds a network that makes it easy to meet other engineering students, form study groups, and develop friendships that last well after graduation.

The Cockrell School established the EOE Program in 1970 to promote the recruitment and academic development of African American, Hispanic, and Native American students interested in pursuing careers in engineering. Since that time, EOE has expanded its goals and now seeks to increase the diversity of its student body by supporting students who come from historically underrepresented population groups in Texas or who have backgrounds or experiences that will contribute to the overall diversity of the Cockrell School of Engineering.

Additional information about the EOE Program is available online at <http://www.engr.utexas.edu/eoe/>; in ECJ 2.102; by telephone at (512) 475-5953; and by e-mail to [eoe@engr.utexas.edu](mailto:eoe@engr.utexas.edu).

## Research Organizations

Faculty members and students of the Cockrell School of Engineering may participate in a wide variety of research projects conducted under the Bureau of Engineering Research. The bureau and its component research units are supported by federal, state, and industrial research contracts and grants that provide part-time employment for selected undergraduate and graduate students and for some faculty members. More than six hundred individual research projects are usually underway at any one time. In addition to providing students with experience in research methodology, these research projects enable faculty members to keep abreast of developments in their principal areas of interest.

Research units currently operating within the Bureau of Engineering Research are the Advanced Manufacturing Center; Advanced Research in Software Engineering; Center for Aeromechanics Research; Center for Energy and Environmental Resources; Center for Energy Security; Center for Mechanics of Solids, Structures, and Materials; Center for Petroleum and Geosystems Engineering; Center for Research in Water Resources; Center for Space Research; Center for Transportation Research; Computer Engineering Research Center; Construction Industry Institute; Phil M. Ferguson Structural Engineering Laboratory; Geotechnical Engineering Center;

Microelectronics Research Center; Offshore Technology Research Center; and the Wireless Networking and Communications Group.

The Nuclear Engineering Teaching Laboratory is an academic unit of the Cockrell School. Interdisciplinary research units operated cooperatively by the school and other colleges are the Energy Institute; Texas Materials Institute; the Center for Construction Industry Studies; the Center for Perceptual Systems; and the Institute for Computational Engineering and Sciences. Research organizations are located both on the main campus and at the J. J. Pickle Research Campus.

## Women in Engineering Program

The Women in Engineering Program (WEP) connects students to opportunities and careers in engineering and introduces them to mentors, peers, and resources in the field. The mission of WEP is to increase the overall percentage of women in the Cockrell School of Engineering. WEP strives to educate girls and women about engineering, inspire women to pursue the unlimited opportunities within the world of engineering, and empower women engineers to benefit society.

WEP's First-Year Initiative (FYI) provides academic and peer support to connect first-year students to the engineering community. The Women in their Second Year of Engineering (WISE) and Consider Every Option (CEO) programs and workshops provide career exploration opportunities to help second-year students and beyond discover possibilities and make informed decisions for the future. Graduates Linked with Undergraduates in Engineering (GLUE) gives students opportunities to gain practical research experience, and WEP leadership seminars help prepare students for leadership roles in the engineering profession.

Additional information about WEP is available online at <http://www.engr.utexas.edu/wep/>; in the WEP office, ECJ 2.108; by phone at (512) 471-5650; and by e-mail to [wep@engr.utexas.edu](mailto:wep@engr.utexas.edu).

## Career Services

Located in ECJ 2.400, the Engineering Career Assistance Center (ECAC) helps to prepare engineering students for job search through counseling, workshops, and a comprehensive on-campus recruiting program. Students should register with the ECAC beginning in August each academic year to receive full benefit of the center's services.

ECAC offers individual career counseling services to engineering students on a walk-in basis and by appointment. Topics addressed in individual counseling sessions and workshops include résumé and letter writing, interviewing skills, dressing for success, site visits, evaluating salary offers, online job searches, career exploration, and other career issues.

The center hosts interviews in its 23 interview rooms throughout the fall and spring recruiting seasons. Interviewers represent employers that seek graduating students, co-op students, and summer interns in all engineering disciplines.

Students can visit the ECAC website at <http://www.engr.utexas.edu/ecac/> and contact ECAC by e-mail to [ecac@engr.utexas.edu](mailto:ecac@engr.utexas.edu) or by phone at (512) 471-1915.

## Cooperative Engineering Education Program

The Cooperative Engineering Education (Co-op) Program is an academic program that allows undergraduate students to obtain full-time engineering experience before they graduate. Students gain work experience directly related to their field of engineering by alternating semesters of full-time campus study with training in industry.

To realize the full academic and professional value of the Co-op Program, the student must complete either two or three semesters with the same employer in a cooperative engineering position. The student is then eligible to receive two or three hours of letter-grade credit that may be applied toward the engineering degree.

Students should apply for the Co-op Program in ECJ 2.400 at least one semester before planning to begin a co-op work term. Students may apply for the first work term after completing twenty-eight semester hours of basic sequence coursework, which must include eight hours each of physics and calculus and coursework in the selected engineering discipline. Students must have a University grade point average of at least 2.50, a grade point average of at least 2.00 in the major area of study, and at least twelve semester hours of degree-applicable coursework left to complete after the final co-op term. Transfer students may apply for the program after one semester at the University.

Students can visit the Co-op Program website at <http://www.engr.utexas.edu/ecac/coop/> and contact the office by e-mail to [co-op@engr.utexas.edu](mailto:co-op@engr.utexas.edu) or by phone at (512) 471-5954.

## UTeachEngineering

UTeachEngineering is an innovative way of preparing engineering students to teach mathematics, physical science, and engineering to grades eight through twelve. The program, a collaboration among the Cockrell School of Engineering, the College of Natural Sciences, the College of Education, and area school districts, seeks to attract interested students to explore teaching in conjunction with their undergraduate experience. Upon completing the program, students graduate with a bachelor's degree and are recommended for a secondary school teaching certificate. The UTeachEngineering program invites students to explore their interest in teaching as early as the freshman year.

Key features of the program are field experience, mentorship and seminar instruction, cohort support, discipline-specific training in literacy, and innovative use of technology. UTeachEngineering students experience the public school classroom and teach progressively longer lessons with the guidance of a mentor teacher. By working with some of Texas's most respected secondary school teachers, students quickly learn whether they are suited for the teaching profession.

More information about UTeachEngineering is available online at <http://www.uteachengineering.org/>.

## Study Abroad

Each semester, a growing number of students in the Cockrell School of Engineering pursue opportunities to study in a foreign country. Practicing engineers who are undergraduates today are likely to work with citizens of other countries and to be involved professionally in international projects. Participation in a study abroad experience is excellent preparation for this global marketplace.

There are many international programs that allow students to take courses that will count toward their degrees. Some programs require proficiency in a foreign language, while others allow for study in English. Engineering students who are interested in going abroad should visit the International Engineering Education Office in ECJ 2.200.

The Cockrell School supports the International Engineering Focus Programs, in which students may study abroad for a long-session semester or summer session; Maymester Abroad courses are also available in May and June. There is a program available for every engineering department. Students may study at respected engineering schools in Argentina, Singapore, Australia, France, Mexico, England, Sweden, South Korea, Turkey, the Netherlands, and Scotland. Courses are approved in advance, to ensure that they will count toward the engineering degree. All the engineering courses in the International Engineering Focus Programs are taught in English.

All engineering students interested in going abroad are encouraged to meet with the International Engineering Education Office program coordinator, who can help them decide which program will best suit their needs. For more information please visit <http://www.engr.utexas.edu/undergraduate/iee>.

More information about engineering study abroad can be found online at <http://www.engr.utexas.edu/undergraduate/studyabroad/>, in ECJ 2.200, or by telephone at (512) 471-4321.

The Cockrell School's International Engineering Education Office and Engineering Student Life Office offers opportunities for students to work on engineering community development projects in Texas and abroad. The Projects in Underserved Communities program is a two-course sequence focusing on project development and project management that allows student teams to work on engineering projects that will directly impact communities abroad. More information about this program is available from the International Engineering Education Office coordinator in ECJ 2.200 or in the Engineering Student Life Office in ECJ 1.224.

## Admission and Registration

### Admission

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. All students who wish to major in engineering must be admitted to the University according to the procedures given in *General Information*. However, enrollment in any engineering degree plan may be limited by the availability of adequate academic resources. Hence, a student may be admitted to the University but denied admission to a specific engineering degree plan. An applicant who is denied admission to an engineering degree plan may seek to enter another major in the Cockrell School of Engineering or in another college or school.

### Freshman Admission

Freshman applicants seeking admission to the Cockrell School must meet the calculus readiness requirement by the official admissions application deadline. More information about calculus readiness is available at <http://www.engr.utexas.edu/undergraduate/admission/calculus/>.



Applicants to the Cockrell School should use the online application at <http://www.applytexas.org/> and select engineering as a first-choice major. When selecting a second-choice major, freshman applicants may choose from one of the many other majors offered at the University, but are encouraged to choose a second engineering major when applying to the Cockrell School.

## Transfer Admission

### Internal Transfer

A student may transfer to the Cockrell School of Engineering from another division of the University in accordance with the regulations given in *General Information*.

A University student, either an engineering major or a non-major, who wants to transfer to a major in the Cockrell School must meet the following minimum requirements to be eligible for consideration:

1. Completion of at least twenty-four semester hours of coursework in residence at the University. Credit by exam and correspondence, extension, and transfer hours may not be counted toward this require
2. A cumulative in-residence grade point average of at least 3.00.
3. Completion of Mathematics 408D and Physics 303K and 103M, or their equivalents.

Additional Information:

- Application Deadlines: December 1 for entrance in the following spring semester; May 1 for entrance in the following summer session or fall semester
- Only currently enrolled students may apply.
- Students may apply during the semester they are completing the minimum requirements to be eligible for consideration.
- Application forms are available online at <http://www.engr.utexas.edu/undergraduate/policies/changeofmajor>.
- Admission to all engineering majors is offered as space is available to the students who are best qualified. For equally qualified applicants, preference is given to the student who has completed more of the basic sequence courses for the requested major.
- Some degree programs may have additional admission considerations; these are described in their individual sections later in this section.
- Students intending to transfer from one major sequence to another must complete the requirements of the basic sequence of the new major and apply for admission to the new major sequence.

### External Transfer

Transfer applicants seeking admission to the Cockrell School must demonstrate that they are taking or have completed a course that is equivalent to Mathematics 408C, *Differential and Integral Calculus*. Details regarding transfer calculus readiness are available at <http://www.engr.utexas.edu/undergraduate/admission/externaltransfer/>. Below are general guidelines for prospective transfer students; additional information is given at <http://bealhorn.utexas.edu/transfer/>. Because significant differences may exist among courses that appear to be quite similar, students are encouraged to contact the Cockrell School for information about which courses are transferable.

Information is available from The University of Texas at Austin, Office of Student Affairs, Cockrell School of Engineering, 1 University Station C2108, Austin TX 78712. The telephone number is (512) 471-4321.

Students who have questions about the requirements of a specific degree plan should contact the appropriate departmental advising office. Additional information about academic advising can be found at <http://www.engr.utexas.edu/undergraduate/services/>.

## Guidelines for Transfer Students

1. Students who wish to transfer to the University from another college or university must apply to the Office of Admissions as described in *General Information* (<http://registrar.utexas.edu/catalogs>). Requirements for admission as a transfer student vary, but all transfer applicants must submit transcripts of all college and high school coursework.
2. Only courses listed in the student's engineering degree program, or equivalent courses accepted by the department chair and approved by the dean, may be counted toward an engineering degree. A course may therefore be accepted for transfer credit but not be applicable toward an engineering degree.
3. Courses that are common to all degree programs in the Cockrell School are listed in Requirements Included in All Engineering Degree Plans (p. 157). These may be taken at any school offering courses acceptable for transfer to the University.
4. Completion of sequences of technical courses in the major area sometimes requires five or more semesters. Therefore, most transfer students should anticipate a minimum of five semesters or the equivalent in residence at the University.
5. Transfer students with more than forty semester hours of credit in an engineering or preengineering program may be eligible for admission to a major sequence as explained in the following section.

## Admission to a Major Sequence

The major sequence in an engineering degree program is a set of courses in which the student learns to put to engineering use the concepts learned in the basic sequence. Major sequence courses are normally taken in the last two years of undergraduate study.

Students must apply online for admission to a major sequence. The following requirements apply both to students seeking to transfer to the school from another institution and to those currently enrolled at the University, either in another college or school or in a basic sequence of courses in the Cockrell School. Those in another college or school must also meet the requirements given in *General Information* for transfer from one division to another within the University.

1. Applications for admission to the major sequence are evaluated by the engineering departments each semester. The criteria for admission vary from semester to semester; current criteria are published at <http://www.engr.utexas.edu/undergraduate/policies/sequence/>.
2. To be eligible for admission to a major sequence, the applicant must have received credit from the University for the basic sequence of courses of the degree plan, either by completing the courses at the University or by receiving transfer credit for equivalent courses taken elsewhere. The student must not be on scholastic probation according to University regulations and must

not be on engineering probation according to the regulations of the Cockrell School. For the basic sequence of courses in each degree plan, see the outline of the plan later in this section.

3. No engineering student may register for a course identified as a major sequence course in any of the degree plans of the Cockrell School unless the student has been admitted to the major sequence.
4. An applicant who has not previously been registered at the University must be admitted to the University as described in *General Information* (<http://registrar.utexas.edu/catalogs>). Admission to the University does not imply or guarantee admission to a major sequence in the Cockrell School. A student's application to the major sequence is considered only after the student has been admitted to the University.
5. Application for admission to a major sequence must be made online at <http://www.engr.utexas.edu/undergraduate/policies/sequence/>.
  - A. A student who is currently enrolled in the school must submit a completed application form.
  - B. A student seeking to transfer from another institution must first be admitted to the University by the Office of Admissions. Each transfer student must then confer with the transfer adviser for the major under which the student was admitted to the Cockrell School. A student who wishes to change majors within the Cockrell School after being admitted to the University must meet the requirements given in the section Internal Transfer.
6. Priority deadlines for submitting completed applications for admission to a major sequence are October 1 for entrance in the following spring semester and March 1 for entrance in either the following summer session or the following fall semester.
7. A student who has been admitted to a major sequence but does not enroll, and who wishes to enter in a subsequent semester, must reapply for admission to a major sequence and must meet all requirements in place at the time of reapplication. A student who has been admitted to the University but does not enroll must reapply to the University for admission according to the policies in place at the time of reapplication.
8. A student who has been enrolled in a major sequence and wishes to return to the school after being out for one or more semesters must apply for admission or readmission to a major sequence on the basis of all requirements in place at the time of return. A student who has been out of the University for at least one long-session semester must apply for readmission to the University.
9. Any student who has been denied admission to a major sequence will not be considered for admission for a subsequent semester unless reapplication is made.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published online before registration each semester and summer session at [registrar.utexas.edu/schedules](http://registrar.utexas.edu/schedules), includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

To register for a course, a student must fulfill the prerequisite given in the catalog or *Course Schedule*. If the student has not fulfilled the prerequisite, he or she must obtain the approval of the department offering the course before registering for it.

During the summer, orientation sessions are held to acquaint entering students with many aspects of life at the University. Abbreviated orientation programs are offered just before the beginning of each semester and summer session.

## Concurrent Enrollment

An engineering student must have the approval of the dean before registering concurrently at another institution, either for coursework in residence or for a distance education course, and before enrolling in correspondence or extension coursework either at the University or elsewhere. Application for this approval should be made online at <http://www.engr.utexas.edu/undergraduate/policies/concurrent/>. The student may not enroll concurrently in any course counted toward the degree in the semester he or she will be graduating. More information about the approval process is available in the Office of Student Affairs, ECJ 2.200.

## Academic Policies and Procedures

### Grade Point Average for Academic Decisions

In the Cockrell School of Engineering, the grade point average used in all academic decisions is the average of grades the student has earned in residence in courses applicable to the degree. Academic decisions are decisions about engineering probation, engineering dismissal, internal transfer (change of major), admission to the major sequence, admission to the Engineering Honors Program, designation as an Engineering Scholar, eligibility for graduation, and eligibility for graduation with University Honors.

### Quantity of Work Rule

#### Maximum Number of Hours in the Long Session

As used in items 1 and 2 below, "coursework" includes correspondence courses, extension courses, distance education courses, nonrequired electives, physical activity courses, and courses for which the student is registered concurrently at another institution.

1. An engineering student may not register for more than seventeen semester hours of coursework without an approved application to do so. Application is made online at <http://www.engr.utexas.edu/undergraduate/policies/maxhours/>.
2. No student may register for more than twenty-one semester hours of coursework during any long-session semester.

### Rules for the Summer Session

A student may not receive credit for more than fourteen semester hours during a twelve-week summer session or for more than eight semester hours in a six-week summer term. These limits apply whether the courses are taken at the University or another institution.

For more information about the quantity of work allowed in the summer, see *General Information*.

## Repetition of a Course

An undergraduate in the Cockrell School who has not earned admission into the major sequence may not enroll in any course required by the engineering degree plan more than twice. A symbol of *Q* or *W* counts as an enrollment unless it is recognized as nonacademic by the dean's office.

To request permission to enroll in a course for a third or more attempt a student must submit a written appeal at [https://utdirect.utexas.edu/link2/appeal\\_entry.WBX](https://utdirect.utexas.edu/link2/appeal_entry.WBX). A student may receive departmental adviser approval to enroll in a course a third or more times only if the student has a substantiated nonacademic reason for not successfully completing the course in earlier attempts. Documentation may be required by the departmental adviser to support the substantiated nonacademic reason. If the student is denied approval to enroll in a required course, he or she will be placed in the undeclared major code and must consider other degree options.

A student who is denied approval to repeat a course in residence at the University will also be denied approval to complete the course by transfer, extension, correspondence, distance education, or credit by examination and then count it toward the degree.

A student in the Cockrell School may not repeat for a letter grade a course in which he or she has earned a grade of *C-* or better.

## Attendance

Engineering students are expected to attend all meetings of the classes for which they are registered. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes. With the approval of the dean, a student may be dropped from a course with a grade of *F* for repeated unexcused absences.

## Portable Computing Devices

The degree programs in the following engineering fields have specific expectations regarding portable computing devices: Chemical Engineering, Electrical and Computer Engineering, and Mechanical Engineering. For more information, please see the catalog sections for these programs.

## Academic Standards

In addition to the scholastic standards described in *General Information* (<http://registrar.utexas.edu/catalogs>), the Cockrell School imposes the following academic standards. Students who fail to meet the standards stated in *General Information* are placed on "scholastic probation" by the University. The probationary status given to those who fail to meet the following school standards is "engineering probation."

In cases with extenuating circumstances, the student may appeal to the dean for a waiver of any of the following requirements.

A student is placed on academic probation in engineering under the following circumstances:

- If his or her grade point average in courses in the major area of study taken in residence falls below 2.00. The "major area of study" includes all courses in the student's discipline (biomedical, chemical, electrical, mechanical, or petroleum and geosystems engineering) and required under the student's engineering degree plan. For architectural engineering and civil engineering majors, the major area includes all courses in both architectural engineering and civil engineering; for aerospace engineering majors, the major area includes all courses in both aerospace engineering and engineering mechanics; for geosystems engineering and hydrogeology majors, the major area includes all courses in both geological sciences and petroleum and geosystems engineering.
- If the student's grade point average in required technical courses taken in residence falls below 2.00. "Required technical courses" are courses taken in the Cockrell School, the College of Natural Sciences, or the Jackson School of Geosciences and required under the student's engineering degree plan; they include approved technical elective courses.

Courses required to overcome admission or prerequisite deficiencies are not considered in decisions on engineering probation.

Grades received at the University in all courses in the major area, including grades in courses that have been repeated, are included in computing the student's grade point average.

A student on engineering probation will be removed from probation at the end of a long-session semester or summer session if the student is no longer subject to engineering probation under either of the criteria above.

After being placed on engineering probation, a student must be removed from probation within the next two long-session semesters in which he or she is registered. A student who fails to be removed from engineering probation within this time will be placed on engineering dismissal from the school.

A student seeking to reenter the school after having been scholastically dismissed from the University must enroll as an undeclared major unless there is a reasonable likelihood that the student can complete the degree plan under which he or she last registered. A student seeking to reenter the school after having been dismissed from engineering must enroll as an undeclared major. Students who are undeclared majors may not enroll in engineering courses.

Any student having academic difficulty should discuss his or her status with an academic adviser in the Office of Student Affairs, Ernest Cockrell Jr. Hall (ECJ) 2.200.

## Pass/Fail Option

All courses required for all engineering degrees must be taken for a letter grade unless the course is offered only on the pass/fail basis. A student may elect to take courses that do not count toward the degree or are being taken to remove a deficiency on the pass/fail basis rather than for a letter grade. To elect the pass/fail system of grading:

1. The student must have received at least thirty hours of college credit before registering for any course on the pass/fail basis, unless the course is offered only on the pass/fail basis.
2. The student may take no more than two courses a semester on the pass/fail basis.
3. The student may take up to five one-semester courses, including correspondence courses, on the pass/fail basis.

4. The student must submit an application no later than the deadline given in the academic calendar at [https://utdirect.utexas.edu/engine/pass\\_fail/index.WBX](https://utdirect.utexas.edu/engine/pass_fail/index.WBX).

For information on how to receive credit by examination, see General Information (<http://catalog.utexas.edu/general-information/academic-policies-and-procedures/center-for-teaching-and-learning/course-placement-and-credit-by-examination>).

## Certificate in Computational Science and Engineering

The Cockrell School sponsors the transcript-recognized Certificate in Computational Science and Engineering (p. 15) along with the Jackson School of Geosciences, the College of Liberal Arts, and the College of Natural Sciences.

## Honors

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

### Cockrell School Honors Program

The Cockrell School of Engineering offers a select group of students the opportunity to participate in the Engineering Honors Program (EHP), a non-curriculum based program designed to enhance the undergraduate experience outside the classroom. Participants gain access to scholarships for first-year students, honors housing, faculty mentors and community building events hosted by the University Honors Center and the EHP.

When submitting an admission application to the University through ApplyTexas, incoming first-year students should mark engineering as their first-choice major and indicate their intent to apply for honors. Students will receive additional instructions to complete the EHP application separately. Both the admission application and the EHP application are due December 1.

The Cockrell School also sends current students invitations to apply for the EHP after they complete twenty-four hours in residence and rank in the top 10 percent of their class and major. Eligible students must have at least sixty hours remaining in their degree program in order to receive an invitation to apply.

To remain in the EHP, students must maintain an in-residence grade point average of at least 3.50. The grade point average is evaluated each year after grades for the spring semester have been awarded.

An EHP student who completes an optional undergraduate honors thesis will receive special honors designation on his or her transcript and is recognized during the graduation ceremony. Additional

information about the honors thesis and the EHP is available at <http://www.engr.utexas.edu/undergraduate/services/honors>.

## Engineering Scholars

Engineering Scholars are designated each spring semester from the sophomore, junior, and senior classes. To be eligible, a student must be enrolled in the Cockrell School, must have completed at least twenty-four semester hours of coursework in residence while enrolled in the school, must have a grade point average that places him or her in the top 5 percent of the class, be of good character, and show promise of continued success in engineering. The grade point average used to determine the student's class rank includes only courses that the student has completed in residence and that are applicable to the degree.

## Professional and Honor Societies

Professional student organizations play an important role in the life of an engineering student. Many of these are student branches of national professional engineering organizations that endeavor to advance the profession of engineering by education, service, professional development, publication, and support of meetings, activities, and conferences. In addition to a variety of professional development and social activities, engineering student organizations frequently support projects that aid students and benefit the Cockrell School, the University, and the community. Membership in Cockrell School student organizations is open to all students studying engineering and related fields.

Honor societies are also an important part of the Cockrell School student community. The purpose of the honor societies is to recognize through membership those students who have established outstanding scholastic records and have demonstrated desirable character and personality traits. The engineering honor societies are Engineering Honors Council, Beta Mu Epsilon (biomedical engineering), Chi Epsilon (architectural and civil engineering), Eta Kappa Nu (electrical and computer engineering), Omega Chi Epsilon (chemical engineering), Phi Alpha Epsilon (architectural engineering), Pi Epsilon Tau (petroleum engineering), Pi Tau Sigma (mechanical engineering), and Sigma Gamma Tau (aerospace engineering). Embracing all branches of engineering is the Texas Alpha Chapter of Tau Beta Pi, which was organized at the University in 1916. Only students in the upper fifth of the senior class or the upper eighth of the junior class, and a few graduate students, qualify scholastically for Tau Beta Pi membership consideration. Character and personality traits are also considered in selecting new members. Generally the chapter elects fewer members than the number of eligible students. Also embracing all branches of engineering is Kappa Theta Epsilon, the cooperative engineering education honor society. Only students who are enrolled in the cooperative engineering program and are in the top twenty percent of their class are considered for Kappa Theta Epsilon membership.

The Student Engineering Council is the governing body representing all undergraduate engineering students. Representatives to the council are elected by the professional student organizations and honor societies in the Cockrell School; members-at-large are elected annually.

Engineering student organizations and honor societies are overseen by the Cockrell School Engineering Student Life, located in ECJ



1.224. A complete list of engineering societies is available at <http://www.engr.utexas.edu/studentlife/learn/>.

## Graduation

### Special Requirements of the School

All University students must have a grade point average of at least 2.00 to graduate. Students in the Cockrell School must also have an in-residence grade point average of at least 2.00 in all courses applicable to the degree, the major area of study and required technical courses. "Major area of study" and "required technical courses" are defined in the section "Academic Standards."

A candidate for a degree in engineering must be registered in the Cockrell School either in residence or in absentia the semester or summer session the degree is to be awarded. No later than the date given in the official academic calendar, the candidate must complete an online application form for graduation or graduation in absentia at <http://www.engr.utexas.edu/graduation/application/apply>.

All individual degree programs must include at least forty-eight semester hours of engineering coursework.

### Residence Rules

All University students must complete in residence at least sixty semester hours of the coursework counted toward the degree. In the Cockrell School, thirty of these sixty hours must be in the major field or in a field closely related to the major as approved by the major department and the dean.

At least the last twenty-four hours of technical coursework counted toward an engineering degree must be taken while the student is registered as an undergraduate engineering major at the University. A student seeking an exception to this requirement must obtain written approval in advance from the dean. Information about the petition process is available in the Office of Student Affairs, Ernest Cockrell Jr. Hall (ECJ) 2.200.

### Degree Audit

After earning ninety semester hours of credit toward the degree, the student should request a degree audit in the undergraduate office of his or her academic department. Failure to do so may delay the student's graduation. Each student may review his or her degree audit through IDA, the University's Interactive Degree Audit system at [registrar.utexas.edu/students/degrees/ida](http://registrar.utexas.edu/students/degrees/ida).

The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill these requirements; see the rules on graduation under a particular catalog (p. 19). Since the student is responsible for correct registration toward completion of the degree program, he or she should seek an official ruling in the Office of Student Affairs before registering if in doubt about any requirement. Avoidance of errors is the main purpose of the degree audit, but it remains the responsibility of the student to fulfill all catalog requirements.

## Applying for Graduation

Students must apply for graduation the first semester they are eligible to graduate. Failure to do so will jeopardize the student's future registration in the Cockrell School. Any subsequent registration must be recommended by the undergraduate adviser and approved by the dean.

A student is considered eligible to graduate if he or she can complete all course requirements by registering for twelve semester hours or fewer.

## Nonresidence Coursework

A student in his or her final semester may not enroll concurrently at another institution in any course, including a distance education course, to be counted toward the degree. In the final semester, the student may also not enroll by extension or correspondence in coursework to be counted toward the degree. All transfer, extension, and correspondence coursework must be added to the student's official record before his or her last semester.

## Final Degree Audit

The student must complete all procedures associated with the final degree audit.

Any student who does not graduate when eligible must contact the Engineering Office of Student Affairs in ECJ 2.200. The degree auditor will advise the student what steps are needed for future registration and graduation.

## Second Degrees

A student who completes a bachelor's degree in engineering may receive a second bachelor's degree in a second engineering discipline if the student (1) completes at least twenty-four hours of approved coursework beyond the work counted toward the first bachelor's degree; and (2) meets all the requirements of the second degree that he or she did not meet in completing the first degree. No student may receive two bachelor's degrees in the same discipline of engineering, even if the technical area options are different. For example, a student may receive the degree of Bachelor of Science in Chemical Engineering and that of Bachelor of Science in Mechanical Engineering but may not receive two Bachelor of Science in Chemical Engineering degrees. A student may not receive bachelor's degrees in both architectural engineering and civil engineering.

## Commencement

In addition to the University commencement ceremony held each spring, the Cockrell School holds graduation ceremonies in December and May. August degree candidates who have completed a degree audit and online graduation application may participate in the May graduation ceremony. Information about graduation is available at <http://www.engr.utexas.edu/graduation>.

## Registration as a Professional Engineer

The practice of engineering has a profound effect on public health, safety, and welfare. Therefore, the commitment to the public good through the licensing or registration provisions available in all states and many foreign countries is an important step in the professional development of an engineer. Becoming licensed in Texas as a professional engineer requires graduation from an approved curriculum in engineering, passage of the examination requirements, and a

specific record of an additional four years or more of active practice in engineering work indicating that the applicant is competent to be placed in responsible charge of such work. Additional requirements include good character and reputation.

Engineering students are encouraged to take the Fundamentals of Engineering examination during their last long-session semester and to seek certification as an “engineer in training.”

For additional information, contact the Texas Board of Professional Engineers or the equivalent agency in another state.

## Degrees and Programs

To satisfy the course requirements for an engineering degree, a student must earn credit for all of the courses listed in the curriculum for that degree.

All University curricula leading to bachelor’s degrees in engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone: (410) 347-7700. ABET sets minimum standards for engineering education, defined in terms of curriculum content, the quality of the faculty, and the adequacy of facilities. Graduation from an accredited program is an advantage when applying for membership in a professional society or for registration as a professional engineer.

## Dual Degree Programs

### Engineering/Plan II Honors Program

A limited number of students whose high school class standing and admission test scores indicate strong academic potential and motivation may pursue a curriculum leading to both a bachelor’s degree in engineering and the Bachelor of Arts, Plan II. This dual degree option, offered jointly by the Cockrell School and the Plan II Honors Program of the College of Liberal Arts, provides the student with challenging liberal arts courses while he or she also pursues a professional degree in engineering. Admission to this program requires at least two separate applications: one to the University and one to the Plan II Honors Program. Students should contact both the Cockrell School Office of Student Affairs and the Plan II office for more information on applications and early deadlines.

### Architectural Engineering/Architecture

A program that leads to both the Bachelor of Science in Architectural Engineering degree and the Bachelor of Architecture degree is available to qualified students. The program combines the course requirements of both degrees and requires six years for completion. Students who wish to pursue both degrees must apply for admission to the School of Architecture according to the procedures and deadlines established by the school. The program is described in Bachelor of Architecture/ Bachelor of Science in Architectural Engineering Dual Degree Program (p. 37); additional information is available from the undergraduate adviser for architectural engineering.

## Simultaneous Majors

An engineering student may pursue two majors simultaneously. The student must follow all procedures and meet all requirements associated with both majors. An engineering student may not pursue two engineering majors simultaneously.

The simultaneous major option is available only to undergraduates who have completed thirty hours of coursework in residence at the University and who have been admitted to both degree programs.

## Technical Area Options

Several engineering degree programs require a student to select a “technical area option” and to complete a specified number of courses in that area. Other degree programs do not require a student to specify a particular option but allow the student to choose courses either within an area of specialty or more broadly across technical areas. Although most options are designed to help the student develop greater competence in a particular aspect of the major, others permit the student to develop background knowledge in areas outside the major. In many cases, students who elect the latter options intend to continue their education in professional or graduate school; these options are particularly appropriate for students who plan to work in those interdisciplinary areas where the creation of new technology through research and development is very important.

## Preparation for Professional School

Technical area options also allow the student to fulfill the special course requirements for admission to professional schools. For more information, students should consult an adviser who is familiar with the admission requirements of the professional program in which the student is interested.

## Medical School

A properly constructed program in engineering provides excellent preparation for entering medical school. The engineer’s strong background in mathematics and natural science--combined with a knowledge of such subjects as applied mechanics, fluid dynamics, heat transfer, thermodynamics, chemical kinetics, diffusion, and electricity and magnetism--enhance the mastery of many aspects of medical science. An engineering background is also useful to those who develop and use new instruments for detecting and monitoring medical abnormalities. The engineering/premedical programs described in this catalog usually afford opportunities to pursue alternative vocations for those who do not enter medical school. Medical school admission requirements for which engineering students may have to make special arrangements include eight semester hours of organic chemistry and fourteen semester hours in the life sciences. A competitive grade point average, a suitable score on the Medical College Admission Test, and letters of recommendation are requirements for admission to most medical schools. Arrangements for providing the necessary data must be completed during the summer preceding the student’s senior year. Preliminary planning should be initiated early in the sophomore year. Students who intend to apply for admission to a medical school should contact the University’s Health Professions Office for information about admission requirements and application and test deadlines.

## Dental School

Much of the information above about medical school applies also to dental school. All applicants must take the Dental Admission Test. Certain courses not taken by all engineers are also required, but these

vary markedly from school to school. Students who are interested in dentistry can obtain specific information from the University's Health Professions Office.

## Law School

Each year a few graduates, representing all engineering disciplines, elect to enter law school, where they find their training in careful and objective analysis is a distinct asset. Many of these students are preparing for careers in patent or corporate law that will enable them to draw on their combined knowledge of engineering and law. Others may not plan to use their engineering knowledge directly, but they still find that the discipline in logical reasoning acquired in an engineering education provides excellent preparation for the study of law. Students interested in admission to the law school of the University should consult the *Law School Catalog*.

## Graduate Study in Business

Since many engineering graduates advance rapidly into positions of administrative responsibility, it is not surprising that they often elect to do graduate work in the area of business administration. In addition to an understanding of the technical aspects of manufacturing, the engineer has the facility with mathematics to master the quantitative methods of modern business administration.

Requirements for admission to the University's graduate business programs are outlined in the *graduate catalog*. Many engineering degree programs offer technical area options that include business and management courses. These can be used with advantage by students who plan to do graduate-level work in business.

## The Minor

While a minor is not required as part of any engineering degree program, the student may choose to complete a minor in a field outside the Cockrell School. A student may complete only one minor. The minor consists of at least twelve semester hours in a single field, including at least six hours of upper-division coursework. Six of these hours must be completed in residence. A course to be counted toward the minor may not be taken on the pass/fail basis, unless the course is offered only on that basis. Only one course counted toward the standard requirements of the student's degree may also be counted toward the minor.

If the minor is in a foreign language other than that used to fulfill the basic education foreign language requirement, the twelve hours may be lower-division but must include at least six hours completed in residence and at least six hours beyond course 507 or the equivalent.

All minors must be approved by the student's major department faculty adviser and the Office of the Dean.

The Cockrell School allows the student to minor in any field outside the school in which the University offers a major. However, prerequisites and other enrollment restrictions may prevent the student from pursuing a minor in some fields. Before planning to use specific courses to make up the minor, the student should consult the department that offers those courses.

## ABET Criteria

To be accredited by the Engineering Accreditation Commission of ABET, a degree plan of the Cockrell School must include the following:

1. One year of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as biological, chemical, and physical sciences.
2. One and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet these stated needs.
3. A general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.

Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.

Here, one year is defined as either 32 semester hours (or equivalent), or one-fourth of the total credits required for graduation, whichever is lesser.

## Liberal Education of Engineers

Each student must complete the University's core curriculum (p. 22). The core curriculum includes the first-year signature course and courses in English composition, American and Texas government, American history, mathematics, science and technology, visual and performing arts, humanities, and social and behavioral sciences. It must be an integral part of all engineering degree programs, so that engineering graduates will be aware of their social responsibilities and the effects of technology on society.

With the appropriate selection of courses, the University's core curriculum and ABET general education requirements can be satisfied simultaneously. Particular attention must be paid to course selection for the social and behavioral sciences and visual and performing arts requirements of the core curriculum, such that the courses selected also fulfill the ABET general education requirements. Guidance for courses that fulfill the ABET requirements is given below.

## Social and Behavioral Sciences Requirement

As part of the University's core curriculum, each student must complete three semester hours of coursework in social and behavioral sciences. Engineering students should work with an academic adviser to select a Social and Behavioral Sciences course that will fulfill the core curriculum requirement and the ABET criteria given above. Students preparing for the professional practice of engineering are encouraged to select coursework in economics to fulfill this requirement. Engineering students should not choose courses in logic, cartography, or mapping, because these courses do not meet the ABET criteria given above.

## Visual and Performing Arts Requirement

As part of the University's core curriculum, each student must complete three semester hours of coursework in visual and performing arts. Engineering students should work with an academic adviser to select a Visual and Performing Arts course that will fulfill the core curriculum requirement and the ABET criteria given above. Engineering students should not choose performance, studio, or ensemble courses to fulfill this requirement, because these courses do not meet the ABET criteria given above.

Architectural engineering majors must take an approved architectural history course as part of the Bachelor of Science in Architectural Engineering requirement. This course (or its prerequisite) will fulfill the visual and performing arts requirement of the core curriculum.

## Foreign Language Requirement

In accordance with the University's basic education requirements, all students must demonstrate proficiency in a foreign language equivalent to that shown by completion of two semesters of college coursework. Credit earned at the college level to achieve the proficiency may not be counted toward a degree. For a student admitted to the University as a freshman, this requirement is fulfilled by completion of the two high school units in a single foreign language that are required for admission; students admitted with a deficiency in foreign language must remove that deficiency as specified in *General Information*.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward a degree in the Cockrell School. However, they are counted as courses for which the student is enrolled, and the grades are included in the University grade point average.

### ROTC Courses

The dean, on the recommendation of the department chair, may substitute three semester hours of credit for air force science, military science, or naval science courses for three semester hours of elective coursework in an engineering degree program. The elective for which an ROTC course is substituted must be approved by the student's major department faculty adviser. All ROTC students should consult their undergraduate adviser. The total number of semester hours required for the degree remains unchanged. Substitution is permitted only upon the student's completion of the last two years of ROTC coursework and receipt at the University of a commission in the service.

## Correspondence and Extension Courses

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence or through distance education at another school will not be counted toward a degree in the Cockrell School unless specifically approved in advance by the dean. Application for this approval should be made online or at the Office of Student Affairs, Ernest Cockrell Jr. Hall 2.200. No more than twenty semester hours required for any degree offered in the Cockrell School may be taken by correspondence.

## Requirements Included in All Engineering Degree Plans

Each student must complete the University's core curriculum (p. 22). In the process of fulfilling engineering degree requirements, students must also complete: one independent inquiry flag, one quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag and at least one writing flag are carried by courses specifically required for each engineering degree plan. As applicable, students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

In addition, students in all engineering degree plans must complete the following requirements. In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below.

Courses	Sem Hrs
<b>Engineering Communication</b>	
• Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T (This course may also be counted toward the writing flag requirement. This course may also be counted toward the ethics and leadership flag requirement, with the exception of Civil Engineering 333T.)	3
<b>Mathematics</b>	
• Mathematics 408C, <i>Differential and Integral Calculus</i> (This course may also be used to fulfill the mathematics requirement of the core curriculum and the quantitative reasoning flag requirement.)	4
• Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
• Mathematics 427K, <i>Advanced Calculus for Applications I</i> (This course may also be used to fulfill the quantitative reasoning flag requirement.)	4
<b>Physics</b>	
• Physics 303K, <i>Engineering Physics I</i> (This course may also be counted toward the science and technology, part I, requirement of the core curriculum and the quantitative reasoning flag requirement.)	3
• Physics 103M, <i>Laboratory for Physics 303K</i>	1
• Physics 303L, <i>Engineering Physics II</i> (This course may also be counted toward the science and technology, part I, requirement of the core curriculum and the quantitative reasoning flag requirement.)	3
• Physics 103N, <i>Laboratory for Physics 303L</i>	1

## Length of Degree Program

An eight-semester arrangement of courses leading to the bachelor's degree is given for each of the engineering degree plans. The exact



order in which the courses are taken is not critical, as long as the prerequisite for each course is fulfilled. A student who registers for fewer than the indicated number of hours each semester will need more than eight semesters to complete the degree. The student is responsible for including in each semester's work any courses that are prerequisite to those he or she will take the following semester.

The first three semesters of all curricula contain many of the same courses. This commonality gives students some freedom to change degree plans without undue loss of credit.

## Bachelor of Science in Aerospace Engineering

The field of aerospace engineering developed because of humanity's desire for aircraft systems for military, commercial, and civilian purposes; it was first called aeronautical engineering or aeronautics. When the space age began, it was natural for aeronautical engineers to participate in the development of spacecraft systems for space exploration. This branch of engineering became known as astronautical engineering or astronautics, and the combined field is called aerospace engineering or aeronautics and astronautics. Because of the diverse nature of the work, the aerospace engineer must have a basic knowledge of physics, mathematics, digital computation, and the various disciplines of aerospace engineering: aerodynamics and propulsion, structural mechanics, flight mechanics and orbital mechanics, and control. Because of their extensive education in fundamental disciplines, aerospace engineers can work in areas other than aerospace engineering and are employed in a wide range of careers.

The objectives of the aerospace engineering degree program are to prepare students for professional practice in aerospace engineering and related engineering and scientific fields; to prepare students for such postbaccalaureate study as their aptitudes and professional goals may dictate; to instill in students a commitment to lifelong education and to ethical behavior throughout their professional careers; and to make students aware of the global and societal effects of technology. To meet these objectives, the faculty has designed a rigorous curriculum that emphasizes fundamentals in the basic sciences, mathematics, and the humanities, and integrates classroom and laboratory experiences in the engineering disciplines of aerodynamics and propulsion, structural mechanics, mechanics of materials, flight and orbital mechanics, controls, computation, measurements and instrumentation, design, and technical communication. The curriculum requires students to use modern engineering tools, to work individually, and to practice teamwork.

The first two years of the aerospace engineering curriculum emphasize fundamental material along with engineering sciences, while the third year introduces concepts in the areas of fluid mechanics, structural mechanics, system dynamics and control, and experimentation. The fourth year provides further depth in aerospace engineering, with emphasis on design and laboratory courses. After acceptance into the major sequence, usually during the junior year, the student elects to pursue one of two technical areas, atmospheric flight or space flight. Both area options are complemented by general education courses and courses offered in other engineering disciplines. In addition, the student may choose technical electives that increase the breadth of the program or that provide additional depth within one or more

subdisciplines. All of the following subdisciplines are also represented in the required courses for both technical area options.

### Aerodynamics and Propulsion

This subdiscipline embraces study in one of the more traditional areas of aerospace engineering. It involves fluid motion, propulsion, lift and drag on wings and other bodies, high-speed heating effects, and wind tunnel investigation of these problems. Topics of study include fluid mechanics, gas dynamics, heat transfer, aerodynamics, propulsion, and experimental fluid mechanics.

### Structural Mechanics

This subdiscipline includes the study of airplane, spacecraft, and missile structures, the materials that make them efficient, and methods for testing, analysis, and design of new structural systems. Course topics include structural analysis, structural dynamics, materials (including advanced composites), aeroelasticity, experimental structural mechanics, and computer-aided design of structures.

### Flight Mechanics and Orbital Mechanics

Flight mechanics involves the analysis of the motion of aircraft, missiles, rockets, reentry vehicles, and spacecraft that are subjected to gravitational, propulsive, and aerodynamic forces; the study of uncontrolled motion of satellites and coasting spacecraft is usually referred to as orbital mechanics. Subject matter in these areas includes trajectory analysis and optimization; attitude dynamics, stability, and control; flight test; orbit determination; orbital operations; systems engineering; sensors; satellite hardware applications; and simulation.

### Flight Control

Control theory is applied in aerospace engineering to the development of automatic flight control systems for aircraft (autopilots and stability augmentation systems), attitude control systems for satellites, and guidance and control systems for missiles, rockets, reentry vehicles, and spacecraft. Course topics include linear system theory, classical control theory, digital control, and probability theory.

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have

been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

**Total 24**  
**Minimum Required 128**

Courses used to fulfill technical elective requirements must be approved by the aerospace engineering faculty before the student enrolls in them.

The student must take all courses required for the degree on the letter-grade basis and must earn a grade of at least C- in each course, except for those listed as Remaining Core Curriculum Courses. He or she must also maintain grade point averages of at least 2.00 in the major area of study and in required technical courses as described in Academic Standards (p. 152), and a cumulative University grade point average of at least 2.00 as described in *General Information*.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Aerospace Engineering 102, 311, 333T (Aerospace Engineering 333T carries a writing flag and an ethics and leadership flag)	7
• Chemistry 301 (may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	3
• Engineering Mechanics 306, 311M, 319	9
• Mathematics 408C, 408D, 427K, 427L (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	16
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
• Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum.)	3
<b>Total 46</b>	
<b>Major Sequence Courses</b>	
• Aerospace Engineering 320, 120K, 324L, 330M, 362K, 365, 366K, 367K, 269K, 370L, 376K	30
• Technical area courses	13
• Approved technical electives	6
<b>Total 49</b>	
<b>Other Required Courses</b>	
• Mechanical Engineering 210, 320, 340, 140L	9
<b>Remaining Core Curriculum Courses</b>	
• English 316K (humanities)	3
• American and Texas government	6
• American history	6
• Social and behavioral sciences	3
• Visual and performing arts	3
• Undergraduate Studies 302 or 303 (some sections carry a writing flag)	3

## Technical Area Options

The technical area option allows the student to choose thirteen semester hours of technical area courses in either atmospheric flight or space flight. Each student should choose a technical area by the end of the first semester of the junior year and plan an academic program to meet the area requirements in the next three semesters. Many students choose technical electives that will strengthen their backgrounds in one specialty area, but this is not required. It should be noted that a student may choose the technical area courses in the other technical area as technical electives.

### Area 1, Atmospheric Flight

Also called aeronautics, this area provides the student with a well-rounded program of study emphasizing the major disciplines of aerodynamics, propulsion, structures, design, performance, and control of aircraft. These subjects are treated at a fundamental level that lays a foundation for work in a broad variety of specialties in the aircraft industry. This option is intended for the undergraduate student whose primary interest is aircraft.

Aerospace Engineering 321K, *Structural Analysis*  
Aerospace Engineering 361K, *Aircraft Design I* (carries an independent inquiry flag)  
Aerospace Engineering 361L, *Aircraft Design II*  
Aerospace Engineering 162M, *High-Speed Aerodynamics Laboratory*  
Aerospace Engineering 364, *Applied Aerodynamics*

### Area 2, Space Flight

Also called astronautics, this area offers a well-rounded program of study that provides a background in the traditional areas of fluid mechanics, materials, structures, propulsion, controls, and flight mechanics, while also giving the student a chance to learn about the space environment, attitude determination and control, orbital mechanics, mission design, and spacecraft systems engineering. These subjects are treated at a fundamental level that lays a foundation for work in a broad variety of specialties in space-related industries. This option is intended for the undergraduate student whose primary interest is space and spacecraft.

Aerospace Engineering 366L, *Applied Orbital Mechanics*  
Aerospace Engineering 166M, *Spacecraft Systems Laboratory*  
Aerospace Engineering 372K, *Attitude Dynamics*  
Aerospace Engineering 374K, *Space Systems Engineering Design*  
Aerospace Engineering 374L, *Spacecraft/Mission Design* (carries an independent inquiry flag and a writing flag)

## Special Projects Laboratories

The department offers students the opportunity to participate in special projects such as student-built radio-controlled aircraft competitions and student satellite-building projects. These time-intensive projects are open to all aerospace engineering students with at least fifteen semester hours of University credit toward the degree and a grade point average of at least 2.50. Academic credit for participation in departmentally approved student projects is available on the pass/fail basis through the course Aerospace Engineering 128. Three such laboratory courses can be combined to count as one three-hour technical elective; one such laboratory course can be combined with

a two-hour cooperative program to count as one three-hour technical elective.

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
<b>Fall</b>	
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
Chemistry 301, <i>Principles of Chemistry I</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
Social and behavioral sciences or visual and performing arts	3
<b>Total 16</b>	
<b>Spring</b>	
Aerospace Engineering 102, <i>Introduction to Aerospace Engineering</i>	1
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
Mechanical Engineering 210, <i>Engineering Design Graphics</i>	2
Physics 303K, <i>Engineering Physics I</i>	3
Physics 103M, <i>Laboratory for Physics 303K</i>	1
American and Texas government	3
American history	3
<b>Total 17</b>	
<b>Second Year</b>	
<b>Fall</b>	
Aerospace Engineering 333T, <i>Engineering Communication</i>	3
Engineering Mechanics 306, <i>Statics</i>	3
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4
Physics 303L, <i>Engineering Physics II</i>	3
Physics 103N, <i>Laboratory for Physics 303L</i>	1
American and Texas government	3
<b>Total 17</b>	
<b>Spring</b>	
Aerospace Engineering 311, <i>Engineering Computation</i>	3
Engineering Mechanics 311M, <i>Dynamics</i>	3
Engineering Mechanics 319, <i>Mechanics of Solids</i>	3
Mathematics 427L, <i>Advanced Calculus for Applications II</i>	4
Mechanical Engineering 320, <i>Applied Thermodynamics</i>	3
<b>Total 16</b>	
<b>Third Year</b>	
<b>Fall</b>	
Aerospace Engineering 320, <i>Low-Speed Aerodynamics</i>	3
Aerospace Engineering 120K, <i>Low-Speed Aerodynamics Laboratory</i>	1
Aerospace Engineering 330M, <i>Linear System Analysis</i>	3

Aerospace Engineering 366K, <i>Spacecraft Dynamics</i>	3
English 316K, <i>Masterworks of Literature</i>	3
Social and behavioral sciences or visual and performing arts	3
<b>Total 16</b>	
<b>Spring</b>	
Aerospace Engineering 362K, <i>Compressible Flow</i>	3
Aerospace Engineering 365, <i>Structural Dynamics</i>	3
Aerospace Engineering 367K, <i>Flight Dynamics</i>	3
Mechanical Engineering 340, <i>Mechatronics</i>	3
Mechanical Engineering 140L, <i>Mechatronics Laboratory</i>	1
Technical area course	3
<b>Total 16</b>	
<b>Fourth Year</b>	
<b>Fall</b>	
Aerospace Engineering 269K, <i>Measurements and Instrumentation</i>	2
Aerospace Engineering 376K, <i>Propulsion</i>	3
Technical area courses	7
Technical elective	3
<b>Total 15</b>	
<b>Spring</b>	
Aerospace Engineering 370L, <i>Flight Control Systems</i>	3
Aerospace Engineering 324L, <i>Aerospace Materials Laboratory</i>	3
American history	3
Technical area course	3
Technical area elective	3
<b>Total 15</b>	

## Bachelor of Science in Architectural Engineering

An unprecedented growth in the building industry, already one of the largest industries in the nation, has created a pressing demand for engineers with specialized training to plan and direct the activities of the industry. This need has been further intensified by the introduction of new materials, new structural systems, and new methods and management techniques. The curriculum in architectural engineering is designed to meet this demand. It offers training in the fundamentals of engineering, with specialization in structures, building energy and environments, or building construction and materials.

This curriculum affords the student the opportunity to attain competence in the structural design of buildings from high-rise to long-span structures and from commercial buildings to complex industrial facilities. Courses in environmental control systems permit graduates to integrate modern electrical, mechanical, and utility distribution systems with the structural and architectural elements of buildings. Courses in construction methods and project management offer the student an opportunity to obtain a versatile background suitable for all areas of the building industry.

The extensive technical requirements, coupled with courses in arts and sciences, provide the architectural engineering student with an opportunity to obtain a background that is ideally suited for careers and positions of responsibility with consulting engineers, general

contractors, manufacturers, government agencies, and architecture firms. The curriculum also serves as an excellent springboard to graduate study in the areas of structural engineering, building energy and environments, construction engineering and project management, or construction materials.

## Program Outcomes

Graduates of the architectural engineering program are expected to have

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- An ability to function on multidisciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts
- Recognition of the need for and an ability to engage in lifelong learning
- Knowledge of contemporary issues
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

## Program Educational Objectives

Graduates of the architectural engineering program should solve architectural engineering problems within a greater societal context. They should

- Act professionally and ethically
- Apply knowledge, strong reasoning, and quantitative skills to design and implement creative and sustainable solutions
- Engage in lifelong learning in order to meet the challenges facing the profession
- Exhibit strong communication, interpersonal, and resource-management skills as leaders in the architectural engineering profession

## Dual Degree program in Architectural Engineering and Architecture

A program that leads to both the Bachelor of Science in Architectural Engineering degree and the Bachelor of Architecture degree is available to qualified students. The program combines the course requirements of both degrees and requires six years for completion. Students who wish to pursue both degrees must apply for admission to the School of Architecture according to the procedures and deadlines established by the school. The program is described in Bachelor of Architecture/ Bachelor of Science in Architectural Engineering Dual Degree Program (p. 37); additional information is available from the undergraduate adviser for architectural engineering.

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course required for the Bachelor of Science in Architectural Engineering may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission and Registration (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses	Sem	Hrs
<b>Basic Sequence Courses</b>		
• Architectural Engineering 102, 217		3
• Chemistry 301 (may be used to fulfill the science and technology, part II, requirement of the core curriculum.)		3
• Civil Engineering 311K, 311S, 314K		9
• Engineering Mechanics 306, 319		6
• Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)		12
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)		8
• Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum.)		3
• Undergraduate Studies 302 or 303 (some sections carry a writing flag)		3
		<b>Total 47</b>

## Major Sequence Courses



• Architectural Engineering 320K, 320L, 323K, 335, 346N, 346P or 370, 465, 366 (Architectural Engineering 465 carries an independent inquiry flag.) (Architectural Engineering 366 carries an ethics and leadership flag)	25
• Civil Engineering 319F, 329, 331 or 335, 333T, 357 (Civil Engineering 333T carries a writing flag.)	15
• Approved technical electives	9
<b>Total 49</b>	

#### Other Required Courses

• Geological Sciences 303	3
• Mechanical Engineering 320	3
• Approved architectural history elective (may be used to fulfill the visual and performing arts requirement of the core curriculum.)	3
• Approved mathematics or science elective	3
<b>Total 12</b>	

#### Remaining Core Curriculum Courses

• English 316K (humanities)	3
• American and Texas government	6
• American history	6
• Social and behavioral sciences	3
<b>Total 18</b>	
<b>Minimum Required 126</b>	

## Technical Electives

Technical electives in architectural engineering are listed in three areas of specialization below. Nine semester hours must be chosen from the following approved technical elective courses or selected with the approval of the department undergraduate adviser. Lower-division courses may not be used as technical electives.

#### Area 1, Structures

Architectural Engineering 345K, *Masonry Engineering*  
 Architectural Engineering 362L, *Structural Design in Wood*  
 Civil Engineering 331, *Reinforced Concrete Design*; or Civil Engineering 335, *Elements of Steel Design*  
 Civil Engineering 360K, *Foundation Engineering (carries an independent inquiry flag)*  
 Civil Engineering 362M, *Advanced Reinforced Concrete Design (carries an independent inquiry flag)*  
 Civil Engineering 362N, *Advanced Steel Design (carries an independent inquiry flag)*  
 Civil Engineering 363, *Advanced Structural Analysis*  
 Civil Engineering 375, *Earth Slopes and Retaining Structures*  
 Engineering Mechanics 339, *Advanced Strength of Materials*

#### Area 2, Building Energy and Environments

Architectural Engineering 346P, *HVAC Design*; or Architectural Engineering 370, *Design of Energy Efficient and Healthy Buildings*  
 Architectural Engineering 371, *Energy Simulation in Building Design*  
 Architectural Engineering 372, *Modeling of Air and Pollutant Flows in Buildings*  
 Civil Engineering 341, *Introduction to Environmental Engineering*  
 Mechanical Engineering 339, *Heat Transfer*  
 Mechanical Engineering 374F, *Fire Science*  
 Mechanical Engineering 374S, *Solar Energy Systems Design*

Mechanical Engineering 379N, *Engineering Acoustics*

#### Area 3, Construction and Materials

Architectural Engineering 358, *Cost Estimating in Building Construction*  
 Civil Engineering 351, *Concrete Materials*  
 Mechanical Engineering 349, *Corrosion Engineering*  
 Mechanical Engineering 378K, *Mechanical Behavior of Materials*  
 Mechanical Engineering 378P, *Properties and Applications of Polymers*

## Suggested Arrangement of Courses

Courses	Sem	Hrs
<b>First Year</b>		
<b>Fall</b>		
Architectural Engineering 102, <i>Introduction to Architectural Engineering</i>	1	1
Chemistry 301, <i>Principles of Chemistry I</i>	3	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4	4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3	3
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3	3
<b>Total 14</b>		
<b>Spring</b>		
Engineering Mechanics 306, <i>Statics</i>	3	3
Geological Sciences 303, <i>Introduction to Geology</i>	3	3
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4	4
Physics 303K, <i>Engineering Physics I</i>	3	3
Physics 103M, <i>Laboratory for Physics 303K</i>	1	1
American and Texas government	3	3
<b>Total 17</b>		
<b>Second Year</b>		
<b>Fall</b>		
Civil Engineering 311K, <i>Introduction to Computer Methods</i>	3	3
Engineering Mechanics 319, <i>Mechanics of Solids</i>	3	3
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4	4
Physics 303L, <i>Engineering Physics II</i>	3	3
Physics 103N, <i>Laboratory for Physics 303L</i>	1	1
Approved architectural history elective	3	3
<b>Total 17</b>		
<b>Spring</b>		
Architectural Engineering 217, <i>Computer-Aided Design and Graphics</i>	2	2
Civil Engineering 311S, <i>Probability and Statistics for Civil Engineers</i>	3	3
Civil Engineering 314K, <i>Properties and Behavior of Engineering Materials</i>	3	3
English 316K, <i>Masterworks of Literature</i>	3	3
Social and behavioral sciences	3	3
Approved mathematics/science elective	3	3
<b>Total 17</b>		

### Third Year

#### Fall

Architectural Engineering 320K, <i>Introduction to Design I</i>	3
Civil Engineering 319F, <i>Elementary Mechanics of Fluids</i>	3
Civil Engineering 329, <i>Structural Analysis</i>	3
Mechanical Engineering 320, <i>Applied Thermodynamics</i>	3
American government	3

**Total 15**

#### Spring

Architectural Engineering 320L, <i>Introduction to Design II</i>	3
Architectural Engineering 335, <i>Materials and Methods of Building Construction</i>	3
Architectural Engineering 346N, <i>Building Environmental Systems</i>	3
Civil Engineering 331, <i>Reinforced Concrete Design</i> ; or Civil Engineering 335, <i>Elements of Steel Design</i>	3
Civil Engineering 333T, <i>Engineering Communication</i>	3

**Total 15**

### Fourth Year

#### Fall

Architectural Engineering 323K, <i>Project Management and Economics</i>	3
Architectural Engineering 346P, <i>HVAC Design</i> ; or Architectural Engineering 370, <i>Design of Energy Efficient and Healthy Buildings</i>	3
Civil Engineering 357, <i>Geotechnical Engineering</i>	3
Approved technical elective	3
American history	3

**Total 15**

#### Spring

Architectural Engineering 465, <i>Integrated Design Project</i>	4
Architectural Engineering 366, <i>Contracts, Liability, and Ethics</i>	3
American history	3
Approved technical electives	6

**Total 16**

## Bachelor of Science in Biomedical Engineering

The mission of the Department of Biomedical Engineering is to develop clinically translatable solutions for human health by training the next generation of biomedical engineers, cultivating leaders, and nurturing the integration of science, engineering, and medicine in a discovery-centered environment. The main educational objective is to provide a thorough training in the fundamentals of engineering science, design, and biology. The curriculum is designed to provide concepts central to understanding living systems from the molecular and cellular levels to the tissue and organismal levels. The curriculum incorporates principles of vertical integration, leading to the choice of a technical area (biomedical imaging and instrumentation, cell and biomolecular engineering, or computational biomedical engineering), and culminates in a team capstone design experience. Research, industrial, and clinical internships provide students with novel educational

experiences and unique perspectives on biomedical engineering applications. Students are expected to develop an understanding of industrial, research, and clinical biomedical engineering environments; an understanding of regulatory issues and biomedical ethics; the ability to create, identify, formulate, and solve biomedical engineering problems; the ability to design systems to meet needs in medical/life science applications; an understanding of life processes at the molecular, cellular, tissue, and organismal levels; the ability to use instrumentation and to make measurements and interpret data in living systems; and an appreciation of the interdisciplinary nature of biomedical engineering research.

## Program Outcomes

Graduates of the biomedical engineering program are expected to have

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- An ability to function on multidisciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts
- A recognition of the need for and an ability to engage in lifelong learning
- A knowledge of contemporary issues
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

## Program Educational Objectives

Achievement of the preceding program outcomes gives students the foundation for accomplishing the biomedical engineering program educational objectives. A few years after graduation, students are expected to be able to

- Conduct themselves with exemplary professional ethics and highest integrity
- Demonstrate a quantitative, analytical, and systems approach to problem solving in their professional practice
- Demonstrate a continuous quest for professional excellence and success
- Participate in continuing education to expand their knowledge of contemporary professional issues
- Exhibit effective scientific, technical, communication, and resource management skills in their professional practice

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum

(p. 22). In some cases, a course that fulfills one of the following requirements may also be counted toward core curriculum or flag requirements; these courses are identified below.

To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in Degrees (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and the two writing flags are carried by courses specifically required for the degree; these courses are identified below. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

The first two years of the curriculum consist of basic sequence courses for all biomedical engineering students. Subsequent enrollment in major sequence courses and one of three technical areas is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission and Registration (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Prior to registration, students must receive approval from the Biomedical Engineering Undergraduate Advising Office for courses to be used to fulfill technical and nontechnical course requirements. The student must take all courses required for the degree on the letter-grade basis and must earn a grade of at least C- in each, except for those listed as Remaining Core Curriculum Courses.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Biology 206L, 311C	5
• Biomedical Engineering 102L, 303, 311, 113L, 314, 333T (Biomedical Engineering 333T carries a writing and an ethics and leadership flag.)	14
• Chemistry 302, 204, and 320M or 328M	8
• Electrical Engineering 319K	3
• Mathematics 408C, 408D, 427K (Mathematics 408C may also be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag)	12
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag)	8
• Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum)	3
	<b>Total 53</b>
<b>Major Sequence Courses</b>	

• Biomedical Engineering 221 (carries a writing flag), 335, 343, 348, 251 (carries a writing flag), 353, 365R, 365S, 370, 371 (carries an independent inquiry flag)	28
• Approved technical area electives	15-17
• Engineering electives	4-6
Note: The technical area option chosen by the student determines the minimum number of semester hours required for the <u>approved technical area electives and the engineering electives</u> . However, the total minimum number of semester hours required for the major sequence courses remains forty-nine.	

**Total 49**

#### Other Required Courses

• Chemistry 128K, 353 or 353M, 369	7
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#### Remaining Core Curriculum Courses

• English 316K (humanities)	3
• American and Texas government	6
• American history	6
• Social and behavioral sciences	3
• Visual and performing arts	3
• Undergraduate Studies 302 or 303 (some sections carry a writing flag)	3

**Total 31**

**Minimum Required 133**

## Technical Area Options

The technical area option allows the student to build on the biomedical engineering core curriculum by choosing fifteen to seventeen semester hours of technical area coursework in biomedical imaging and instrumentation, cell and biomolecular engineering, or computational biomedical engineering. Each student should choose a technical area by the end of the sophomore year and plan an academic program to meet the area requirements during the next two years.

**Preparation for health professions.** Students who plan to attend medical, veterinary, or dental school in Texas must complete coursework in addition to that required for the BS in Biomedical Engineering in order to meet professional school admission requirements; those who plan to attend schools outside Texas may need additional coursework. The student is responsible for knowing and meeting these additional requirements, but assistance and information are available from full-time Career Coaches and part-time peer mentors in the Career Design Center in the College of Natural Sciences, PAI 5.03. Additional information about preparation for health professions is available online at <http://cns.utexas.edu/careers/health-professions/>.

**Preparation for law.** There is no sequential arrangement of courses prescribed for a pre-law program. The Association of American Law Schools puts special emphasis on comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and analytical power in thinking. Courses relevant to these objectives deal with communication of ideas, logic, mathematics, social sciences, history, philosophy, and the physical sciences. Services for pre-law students are provided to students in

all colleges by the Sanger Learning Center, JES A115. Additional information about preparation for law is available online.

**Plan II Honors Program.** Students enrolled in the Plan II Honors Program are encouraged to contact the Biomedical Engineering Undergraduate Advising Office, in addition to the Plan II Office to ensure that requirements for both programs are met. Plan II courses may count toward biomedical engineering program requirements.

**Certificate programs.** Biomedical engineering students may enrich their education through the following certificate programs.

*Business Foundations Program.* Students who wish to learn about fundamental business concepts and practices may take supplemental coursework that leads to the Business Foundations Certificate, awarded by the Red McCombs School of Business. The program is described in Degrees and Programs (p. 51) of the McCombs School. More information about the Business Foundations Program is available at <http://new.mcombs.utexas.edu/bba/business-foundations> from the McCombs School, and from the Biomedical Engineering Undergraduate Advising Office.

*Elements of Computing.* Students who wish to learn about computer science may take the coursework that leads to the certificate in the Elements of Computing, awarded by the Department of Computer Science. The program is described in Degrees (p. 484) of the College of Natural Science. More information about the Elements of Computing Program is available at [http://www.cs.utexas.edu/academics/non\\_majors/elements/](http://www.cs.utexas.edu/academics/non_majors/elements/), from the Department of Computer Science, and from the Biomedical Engineering Undergraduate Advising Office.

## Technical Area 1, Biomedical Imaging and Instrumentation

This technical area is designed for students interested in the general area of medical instrumentation and imaging science. The main objective is to prepare students to design and use biomedical instrumentation for imaging, diagnostic, and therapeutic applications, with focus on the new fields of molecular engineering, cell and tissue engineering, and biotechnology. A solid foundation, practical knowledge, and skills are established in analog and digital network analysis, software and hardware programming, electronic circuits, sensors, data acquisition systems, image and signal processing, and computational analysis of data as it applies to living systems.

Students must complete the following:

1. The following three courses:  
Electrical Engineering 312, *Software Design and Implementation I*  
Electrical Engineering 438, *Fundamentals of Electronic Circuits*  
Electrical Engineering 445S, *Real-Time Digital Signal Processing Laboratory*
2. Six hours of coursework chosen from the following list:  
Biomedical Engineering 347, *Fundamentals of Biomedical Optics*  
Biomedical Engineering 357, *Biomedical Imaging Modalities*  
Biomedical Engineering 374K, *Biomedical Instrument Design*; and Biomedical Engineering 374L, *Applications of Biomedical Engineering Laboratory*  
Electrical Engineering 445L, *Embedded Systems Design Laboratory*; and Electrical Engineering 445M, *Embedded and Real-Time Systems Laboratory*  
Electrical Engineering 347, *Modern Optics*

Electrical Engineering 351M, *Digital Signal Processing*  
Electrical Engineering 371R, *Digital Image and Video Processing*  
Electrical Engineering 422C, *Software Design and Implementation II*

## Technical Area 2, Cell and Biomolecular Engineering

The major objective of this area is to teach students how to integrate knowledge in cell and molecular biology with engineering analysis, so that they can address problems in molecular-based medicine. Three disciplines within this technical area are tissue engineering as it relates to the underlying molecular biology issues; materials science, with an emphasis on bioactive materials and construction of nanoscale devices and probes; and bioengineering analysis of infectious diseases and immunological responses.

Students must complete the following:

1. The following two courses:  
Biomedical Engineering 339, *Biochemical Engineering*  
Biomedical Engineering 352, *Engineering Biomaterials*
2. Nine hours of coursework chosen from the following list; at least three hours must be in biomedical engineering.  
Biomedical Engineering 344, *Biomechanics*  
Biomedical Engineering 354, *Molecular Sensors and Nanodevices for Biomedical Engineering Applications*  
Biomedical Engineering 376, *Cell Engineering*  
Biomedical Engineering 379, *Tissue Engineering*  
Chemical Engineering 350, *Chemical Engineering Materials*  
Approved upper-division biology courses  
Chemistry 328N, *Organic Chemistry II*, and Chemistry 128L, *Organic Chemistry Laboratory*; or Chemistry 320N, *Organic Chemistry II*, and Chemistry 220C, *Organic Chemistry Laboratory*

## Technical Area 3, Computational Biomedical Engineering

The objective of this area is to provide students with the knowledge and skills that will enable them to design and use computational algorithms to address problems in biomedical research and health care. Examples include (a) designing medical decision aids using statistical and machine learning models, (b) dynamic modeling and computer simulation to study the biomechanics and control of movement, (c) development of thermodynamic models of dynamic processes at the microscopic and macroscopic scales in biological systems, and (d) image processing techniques for quantitative measurement and interpretation of biomedical images.

All students must complete the following:

1. The following four courses:  
Electrical Engineering 312, *Software Design and Implementation I*  
Electrical Engineering 422C, *Software Design and Implementation II*  
Electrical Engineering 360C, *Algorithms*  
Mathematics 325K, *Discrete Mathematics*; or Philosophy 313K, *Logic, Sets, and Functions*
2. Three hours of coursework chosen from the following list:  
Biomedical Engineering 341, *Tools for Computational Biomolecular Engineering*



Biomedical Engineering 342, *Computational Biomechanics*  
 Biomedical Engineering 344, *Biomechanics*  
 Biomedical Engineering 345, *Graphics and Visualization Laboratory*  
 Biomedical Engineering 346, *Computational Biomolecular Engineering*  
 Mathematics 340L, *Matrices and Matrix Calculations*  
 Approved computer science courses

Biology 206L, *Introductory Laboratory Experiments in Biology* 2  
 Undergraduate Studies 302 or Undergraduate Studies 303, *First-Year Signature Course* 3  
 Electrical Engineering 319K, *Introduction to Embedded Systems* 3  
 Mathematics 408D, *Sequences, Series, and Multivariable Calculus* 4  
 Physics 303K, *Engineering Physics I* 3  
 Physics 103M, *Laboratory for Physics 303K* 1  
 Rhetoric and Writing 306, *Rhetoric and Writing* 3  
**Total 19**

## Engineering Electives

Depending on which technical area is chosen, all students must complete four to six semester hours of engineering electives. At least three hours must be in a lecture or laboratory course. The remaining hours may be in a research project or an internship. The following may be counted toward this requirement:

- An engineering course in any one of the three technical areas. A course may not be counted toward both the technical area requirement and the engineering elective requirement.
- An approved upper-division engineering, physics, mathematics, or computer science course. A course may not be counted toward both the technical area requirement and the engineering elective requirement.
- Three hours of coursework chosen from the following list:
  - Biomedical Engineering 325L, *Cooperative Engineering*; or Biomedical Engineering 225M, *Cooperative Engineering*
  - Biomedical Engineering 177, 277, Biomedical Engineering 377, *Undergraduate Research Project*
  - Biomedical Engineering 377M, *Medical Internship*
  - Biomedical Engineering 377P, *Integrated Clinical Research Internship*
  - Biomedical Engineering 377Q, *Integrated Clinical Medical Internship*
  - Biomedical Engineering 377R, *Research Internship*
  - Biomedical Engineering 377S, *Industrial Internship*

### Second Year

#### Fall

Biomedical Engineering 314, *Engineering Foundations of Biomedical Engineering* 3  
 Chemistry 320M, *Organic Chemistry I*; or Chemistry 328M, *Organic Chemistry I* 3  
 Chemistry 128K, *Organic Chemistry Laboratory* 1  
 English 316K, *Masterworks of Literature* 3  
 Mathematics 427K, *Advanced Calculus for Applications I* 4  
 Physics 303L, *Engineering Physics II* 3  
 Physics 103N, *Laboratory for Physics 303L* 1  
**Total 18**

#### Spring

Biomedical Engineering 311, *Network Analysis in Biomedical Engineering* 3  
 Biomedical Engineering 113L, *Introduction to Numerical Methods in Biomedical Engineering* 1  
 Biomedical Engineering 333T, *Engineering Communication* 3  
 Biomedical Engineering 335, *Engineering Probability and Statistics* 3  
 Chemistry 353, *Physical Chemistry I*; or Chemistry 353M, *Physical Chemistry I for Life Sciences* 3  
 Chemistry 369, *Fundamentals of Biochemistry* 3  
**Total 16**

### Third Year

#### Fall

Biomedical Engineering 221, *Measurement and Instrumentation Laboratory* 2  
 Biomedical Engineering 343, *Biomedical Engineering Signal and Systems Analysis* 3  
 Biomedical Engineering 365R, *Quantitative Engineering Physiology I* 3  
 Technical area electives 6  
**Total 14**

#### Spring

Biomedical Engineering 251, *Biomedical Image, Signal, and Transport Process Laboratory* 2  
 Biomedical Engineering 348, *Modeling of Biomedical Engineering Systems* 3  
 Biomedical Engineering 353, *Transport Phenomena in Living Systems* 3  
 Biomedical Engineering 365S, *Quantitative Engineering Physiology II* 3

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
<b>Fall</b>	
Biology 311C, <i>Introductory Biology I</i>	3
Biomedical Engineering 102L, <i>Introduction to Biomedical Engineering Design Principles</i>	1
Biomedical Engineering 303, <i>Introduction to Computing</i>	3
Chemistry 302, <i>Principles of Chemistry II</i>	3
Chemistry 204, <i>Introduction to Chemical Practice</i>	2
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
<b>Total 16</b>	
<b>Spring</b>	

Technical area electives	3
American history	3
<b>Total 17</b>	

#### Fourth Year

##### Fall

Biomedical Engineering 370, <i>Principles of Engineering Design</i>	3
Government 310L, <i>American Government</i>	3
Technical area elective	3
Engineering elective	3
Visual and performing arts	3
Social and behavioral sciences	3
<b>Total 18</b>	

##### Spring

Biomedical Engineering 371, <i>Biomedical Engineering Design Project</i>	3
Government 312L, <i>Issues and Policies in American Government</i>	3
Engineering elective	3
Technical area elective	3
American history	3
<b>Total 15</b>	

mathematics, engineering science, engineering design, and the liberal arts.

## Portable Computing Devices

Students entering chemical engineering are required to have a laptop computer at their disposal. Laptops do not need to be brought to campus on a daily basis, but individual courses may require that a laptop be brought to certain lectures, labs, and/or exams. Minimum requirements for the laptop are listed on the department's website.

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition each student must complete the University's core curriculum (p. 22). In some cases a course required for the Bachelor of Science in Chemical Engineering may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in Degrees (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one course with a quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements (p. 24) are identified in the Course Schedule.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission and Registration (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Chemical Engineering 210, 317, 353	8
• Chemistry 302, 204, 128K, 328M, 353 (Chemistry 302 may be used to fulfill the science and technology, part II, requirement of the core curriculum; it carries a quantitative reasoning flag) (Chemistry 204 carries a quantitative reasoning flag) (Chemistry 353 carries a quantitative reasoning flag)	12
• Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8

## Bachelor of Science in Chemical Engineering

Chemical engineering is one of the most broadly based engineering disciplines. Its field of practice covers the development, design, and control of processes and products that involve molecular change, both chemical and biological, and the operation of such processes. Because many of the products that sustain and improve life are produced by carefully designed and controlled molecular changes, the chemical engineer serves in a wide variety of industries. These industries range from chemical and energy companies to producers of all types of consumer and specialty products, pharmaceuticals, textiles, polymers, advanced materials, and solid-state and biomedical devices.

Careers are available in industry, government, consulting, and education. Areas of professional work include research and development, operations, technical service, product development, process and plant design, market analysis and development, process control, and pollution abatement.

The objective of the chemical engineering degree program is to prepare students for professional practice in chemically related careers after the bachelor's degree or an advanced degree. Chemical engineering graduates are expected to apply fundamentals of science and engineering to solve problems of analysis and design of components, systems, and processes important in chemical engineering practice and research; demonstrate interpersonal skills required to lead and/or participate effectively in interdisciplinary projects; recognize the importance of lifelong learning in meeting professional and personal goals so they can be successful in their chosen profession, including graduate school; exhibit effectiveness in communication skills; and articulate and practice professional, ethical, environmental, and societal responsibilities, and value different global and cultural perspectives. To meet the program objective, the faculty has designed a rigorous, demanding, and state-of-the-art curriculum that integrates lectures and laboratory experience in basic science,

- Rhetoric and Writing 306 (may also be counted toward the English composition requirement of the core curriculum.) 3

**Total 43**

#### Major Sequence Courses

- Chemical Engineering 322, 333T, 348, 350, 253K, 253M, 354, 360, 363, 264, 372, 473K (Chemical Engineering 333T carries a writing flag and an ethics and leadership flag; Chemical Engineering 473K carries an independent inquiry flag.) 34
- Approved technical focus area electives in chemical engineering 6
- Approved technical focus area electives 6

**Total 46**

#### Other Required Courses

- Biology 311C 3
- Chemistry 128L, 328N, 153K (Chemistry 153K carries a writing flag) 5
- Chemistry elective with a laboratory experience chosen from Chemistry 431, 354 and 154K, 154K and 354L, and 455; or Chemical Engineering 179 and Chemistry 339K, 354, or 369 4
- Approved advanced mathematics, physics, chemistry, or biology elective 3

**Total 15**

#### Remaining Core Curriculum Courses

- English 316K 3
- American and Texas government 6
- American history 6
- Visual and performing arts 3
- Social and behavioral sciences 3
- Undergraduate Studies 302 or 303 (some sections carry a writing flag) 3

**Total 24**

**Minimum Required 128**

## Honors Program

Chemical engineering students who maintain a grade point average of at least 3.50 may take the honors research course, Chemical Engineering 679H. In this course the student performs research over two consecutive semesters under the supervision of a faculty member, makes two oral presentations, and writes a thesis. Chemical Engineering 679H may be used to fulfill either the approved area electives requirement or the approved area electives in chemical engineering requirement.

## Technical Focus Areas

Because of the broad training in natural sciences and engineering received by the chemical engineer, opportunities are provided for students also to develop particular talents and interests in one or two areas of emphasis. Each student must complete twelve semester hours in one of the following areas or six semester hours in each of two areas, including at least two chemical engineering courses. The technical focus area courses should be selected in consultation with

a faculty adviser and must be approved by the department chair. The courses listed in each area do not constitute a complete list of technical focus area courses but illustrate the types of courses that are generally suitable for a given area. A list of suggested complementary biology, physics, mathematics, and chemistry electives for each of the technical focus areas is available from the Chemical Engineering Undergraduate Office and published on the departmental Web page.

Students with a grade point average of at least 3.50 who are interested in seeking an advanced degree in chemical engineering are encouraged to discuss their plans with the graduate adviser or another faculty member. These students are encouraged to take at least one advanced mathematics course among their electives. They should also inquire about undergraduate research positions in the department.

For all areas, Chemical Engineering 325L and 377K may be counted as chemical engineering electives only with the approval of the student's undergraduate faculty adviser. Chemical Engineering 377K may be counted only once toward the degree.

### Area 1, Process Systems and Product Engineering

The chemical process industry is one of the most advanced in the applications of modern design and control techniques and computer technology. Competence in design, economics, fault detection, optimization, control, and simulation is essential in this industry. Chemical engineers are also frequently involved in the development of new consumer and specialty products, an assignment that requires not only technical skills but also an understanding of the principles of successful marketing and quality control. Chemical engineering courses in this technical focus area cover topics such as optimization and statistical quality control, while courses in mechanical engineering and electrical engineering deal with both theory and applications in statistics, computer control, economic analysis, and operations research.

Chemical Engineering 341, *Design for Environment*  
 Chemical Engineering 342, *Chemical Engineering Economics and Business Analysis*  
 Chemical Engineering 356, *Optimization: Theory and Practice*  
 Chemical Engineering 376K, *Process Evaluation and Quality Control*  
 Electrical Engineering 370K, *Computer Control Systems*  
 Electrical Engineering 379K, Topic: *Statistical Quality Control*  
 Architectural Engineering 323K, *Project Management and Economics*  
 Mechanical Engineering 335, *Engineering Statistics*  
 Mechanical Engineering 348D, *Introduction to Mechatronics II*  
 Mechanical Engineering 353, *Engineering Finance*  
 Mechanical Engineering 366L, *Operations Research Models*  
 Marketing 320F, *Foundations of Marketing*  
 International Business 378, *International Business Operations*  
 Marketing 460, *Information and Analysis (carries a quantitative reasoning flag)*  
 Upper-division mathematics course

### Area 2, Materials Engineering

Advances in technology and improvements in our quality of life are linked to the development, processing, and manufacture of engineering materials. Materials span the spectrum from "hard" to "soft" materials and include metals, ceramics, semiconductors, and polymers; all are prepared in carefully controlled chemical processes. These materials are used technologically in objects such as catalysts, fuel cells, microelectronic devices, membranes, solar cells, and high-performance plastics. With advancements in analytical probes and modeling, our understanding of materials has become increasingly more molecular and the traditional boundaries between disciplines have faded to the extent that this is a truly interdisciplinary

area. Chemical engineers can assume a creative role in this area when provided with the appropriate fundamentals and applications background.

Chemistry 341, *Special Topics in Laboratory Chemistry*  
Chemistry 354, *Quantum Chemistry and Spectroscopy*  
Chemistry 354L, *Physical Chemistry II*  
Chemistry 367L, *Macromolecular Chemistry*  
Chemistry 376K, *Advanced Analytical Chemistry*  
Chemical Engineering 322M, *Molecular Thermodynamics*  
Chemical Engineering 323, *Chemical Engineering for Micro- and Nanofabrication*  
Chemical Engineering 355, *Introduction to Polymers*  
Chemical Engineering 379, Topic: *Computation Methods with Applications to Materials*  
Chemical Engineering 379, Topic: *Polymerization Kinetics and Reaction Engineering*  
Electrical Engineering 339, *Solid-State Electronic Devices*  
Mechanical Engineering 349, *Corrosion Engineering*  
Mechanical Engineering 359, *Materials Selection*  
Mechanical Engineering 374S, *Solar Energy Systems Design*  
Mechanical Engineering 378C, *Electroceramics*  
Mechanical Engineering 378S, *Structural Ceramics*  
Physics 338K, *Electronic Techniques*  
Physics 355, *Modern Physics and Thermodynamics*  
Physics 375S, *Introductory Solid-State Physics*

### Area 3, Environmental Engineering

Chemical engineers are uniquely qualified to contribute to the solution of environmental problems and to design processes and products that minimize environmental hazards. From pollution prevention by process optimization, to new understanding of chemical processes that occur in the environment, to new materials for advanced catalysts and carbon-free energy sources, chemical engineers are creating the "green" technologies needed to sustain the planet.

Civil Engineering 341, *Introduction to Environmental Engineering*  
Civil Engineering 342, *Water and Wastewater Treatment Engineering*  
Civil Engineering 364, *Design of Wastewater and Water Treatment Facilities*  
Civil Engineering 369L, *Air Pollution Engineering*  
Civil Engineering 370K, *Environmental Sampling and Analysis*  
Chemical Engineering 341, *Design for Environment*  
Chemical Engineering 357, *Technology and Its Impact on the Environment*  
Chemical Engineering 359, *Energy Technology and Policy*  
Chemical Engineering 376K, *Process Evaluation and Quality Control*  
Mechanical Engineering 374S, *Solar Energy Systems Design*  
Mechanical Engineering 379M, *Topics in Mechanical Engineering*

### Area 4, Biochemical, Biomolecular, and Biomedical Engineering

#### Track A: Cellular and Bioprocess Engineering

Chemical engineers are developing innovative solutions to practical problems in biotechnology and in the biochemical, pharmaceutical, and life science industries. This track is designed to prepare students for a career or research in the areas of applied cellular engineering and bioprocess engineering in the chemicals and pharmaceutical industry. Chemical engineering and elective courses are available that cover chemical engineering principles applied to biological systems and the fundamentals of biomolecular, cellular, and metabolic processes. This track is also suitable for students interested in biofuels.

Biology 311D, *Introductory Biology II*  
Biology 325, *Genetics*  
Biology 326R, *General Microbiology*

Chemical Engineering 339, *Introduction to Biochemical Engineering*  
Chemical Engineering 339P, *Introduction to Biological Physics*  
Chemistry 339K, *Biochemistry I*  
Chemistry 339L, *Biochemistry II*  
Chemistry 370, *Physical Methods for Biochemistry (carries a writing flag)*

#### Track B: Biomedical Engineering

This track is designed to prepare students for careers in the biomedical and pharmaceutical industries that deal with medical systems or improvement of health treatment alternatives. This is also a natural track to be followed by students who plan to attend medical school. Chemical engineering courses and electives are available that cover the application of chemical engineering principles to the design of new medical and therapeutic devices, as well as to the understanding of physiological processes.

Biology 311D, *Introductory Biology II*  
Biology 320, *Cell Biology*  
Biology 325, *Genetics*  
Biology 326R, *General Microbiology*  
Biology 365R, *Vertebrate Neurobiology*  
Biology 365S, *Systems Physiology*  
Biomedical Engineering 352, *Engineering Biomaterials*  
Biomedical Engineering 353, *Transport Phenomena in Living Systems*  
Biomedical Engineering 365R, *Quantitative Engineering Physiology I*  
Chemical Engineering 339, *Introduction to Biochemical Engineering*  
Chemical Engineering 339P, *Introduction to Biological Physics*  
Chemical Engineering 339T, *Cell and Tissue Engineering*  
Chemical Engineering 355, *Introduction to Polymers*  
Chemistry 339K, *Biochemistry I*  
Electrical Engineering 374K, *Biomedical Electronic Instrument Design*  
Mechanical Engineering 354, *Introduction to Biomechanical Engineering*

### Area 5, Energy Technologies

The need for energy sustainability and new energy technologies provides some of the most significant scientific and engineering challenges that face society. Chemical engineers are uniquely qualified to address these issues and contribute new solutions to the problem. Technologies include solar energy utilization in the form of photovoltaics, biofuels and solar fuels; new and more efficient ways to extract fossil fuels from existing reservoirs; alternative power sources like wind, geothermal, and nuclear. Policy is also an important and active area that involves chemical engineers. Chemical engineering and other elective courses are available that teach fundamentals of energy technology and policy.

Chemical Engineering 323, *Chemical Engineering for Micro- and Nanofabrication*  
Chemical Engineering 339, *Introduction to Biochemical Engineering*  
Chemical Engineering 341, *Design for Environment*  
Chemical Engineering 355, *Introduction to Polymers*  
Chemical Engineering 357, *Technology and Its Impact on the Environment*  
Chemical Engineering 359, *Energy Technology and Policy*  
Civil Engineering 341, *Introduction to Environmental Engineering*  
Electrical Engineering 339, *Solid-State Electronic Devices*  
Mechanical Engineering 374S, *Solar Energy Systems Design*  
Mechanical Engineering 379M, *Topics in Mechanical Engineering*  
Petroleum and Geosystems Engineering 305, *Energy and the Environment*

### Area 6, Engineering Economics and Business Leadership



Chemical engineers who understand the economic and policy issues faced by modern chemical and materials companies are needed to solve the challenges of modern industry. Globalization, sustainability, safety and modern labor practices, intellectual property protection, and the process of innovation are all issues facing modern industry. This focus area is designed to prepare students for business leadership in a technical arena.

Chemical Engineering 342, *Chemical Engineering Economics and Business Analysis*  
 Chemical Engineering 356, *Optimization: Theory and Practice*  
 Architectural Engineering 323K, *Project Management and Economics*  
 Economics 304K, *Introduction to Microeconomics*  
 Economics 304L, *Introduction to Macroeconomics*  
 Economics 328, *Industrial Organization*  
 Economics 339K, *International Trade and Investment*  
 Economics 351K, *Current Issues in Business Economics*  
 Mechanical Engineering 353, *Engineering Finance*  
 Mechanical Engineering 366L, *Operations Research Models*  
 Marketing 320F, *Foundations of Marketing*  
 International Business 378, *International Business Operations*  
 Marketing 460, *Information and Analysis (carries a quantitative reasoning flag)*  
 Science, Technology and Society 332, *The Nanotechnology and Science Revolution*

## Suggested Arrangement of Courses

Courses	Sem	Hrs
<b>First Year</b>		
<b>Fall</b>		
Chemistry 302, <i>Principles of Chemistry II</i>		3
Chemical Engineering 102, <i>Introduction to Chemical Engineering</i> (optional; students who do not take this course will take fifteen hours of coursework in the fall semester of the first year.)		1
Chemical Engineering 210, <i>Introduction to Computing</i>		2
Mathematics 408C, <i>Differential and Integral Calculus</i>		4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>		3
Social and behavioral sciences		3
	<b>Total</b>	<b>15 or 16</b>
<b>Spring</b>		
Biology 311C, <i>Introductory Biology I</i>		3
Chemistry 204, <i>Introduction to Chemical Practice</i>		2
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>		4
Physics 303K, <i>Engineering Physics I</i>		3
Physics 103M, <i>Laboratory for Physics 303K</i>		1
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>		3
	<b>Total</b>	<b>16</b>

<b>Second Year</b>	
<b>Fall</b>	
Chemistry 128K, <i>Organic Chemistry Laboratory</i>	1
Chemistry 328M, <i>Organic Chemistry I</i>	3
Chemical Engineering 317, <i>Introduction to Chemical Engineering Analysis</i>	3
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4
Physics 303L, <i>Engineering Physics II</i>	3
Physics 103N, <i>Laboratory for Physics 303L</i>	1
	<b>Total</b>
	<b>15</b>

<b>Spring</b>	
Chemistry 128L, <i>Organic Chemistry Laboratory</i>	1
Chemistry 328N, <i>Organic Chemistry II</i>	3
Chemistry 353, <i>Physical Chemistry I</i>	3
Chemical Engineering 353, <i>Transport Phenomena</i>	3
English 316K, <i>Masterworks of Literature</i>	3
American and Texas government	3
	<b>Total</b>
	<b>16</b>

<b>Third Year</b>	
<b>Fall</b>	
Chemistry 153K, <i>Physical Chemistry Laboratory</i>	1
Chemical Engineering 322, <i>Thermodynamics</i>	3
Chemical Engineering 333T, <i>Engineering Communication</i>	3
Chemical Engineering 253K, <i>Applied Statistics</i>	2
Chemical Engineering 354, <i>Transport Processes</i>	3
Chemistry elective	4
	<b>Total</b>
	<b>16</b>

<b>Spring</b>	
Chemical Engineering 253M, <i>Measurement, Control, and Data Analysis Laboratory</i>	2
Chemical Engineering 363, <i>Separation Processes and Mass Transfer</i>	3
Chemical Engineering 348, <i>Numerical Methods in Chemical Engineering and Problem Solving</i>	3
American history	3
Approved technical area course	3
Visual and performing arts	3
	<b>Total</b>
	<b>17</b>

<b>Fourth Year</b>	
<b>Fall</b>	
Chemical Engineering 350, <i>Chemical Engineering Materials</i>	3
Chemical Engineering 264, <i>Chemical Engineering Process and Projects Laboratory</i>	2
Chemical Engineering 372, <i>Chemical Reactor Analysis and Design</i>	3
Approved chemical engineering area course	3
American and Texas government	3
Approved advanced mathematics, physics, chemistry, or biology elective	3
	<b>Total</b>
	<b>17</b>

<b>Spring</b>	
Chemical Engineering 360, <i>Process Control</i>	3

Chemical Engineering 473K, <i>Process Design and Operations</i>	4
American history	3
Approved chemical engineering area course	3
Approved technical area course	3
<b>Total 16</b>	

- Knowledge of contemporary issues
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

## Program Educational Objectives

Graduates of the civil engineering program should solve civil engineering problems within a greater societal context. They should

- Act professionally and ethically
- Apply knowledge, strong reasoning, and quantitative skills to design and implement creative and sustainable solutions
- Engage in lifelong learning in order to meet the challenges facing the profession
- Exhibit strong communication, interpersonal, and resource-management skills as leaders in the civil engineering profession

## Bachelor of Science in Civil Engineering

Engineering is the application of scientific principles and technical knowledge to real-world problems. Civil engineering is the segment of the engineering profession that strives to provide for the basic needs of humanity. The civil engineer is involved with the physical environment through the planning, design, construction, and operation of building and housing systems, transportation systems, and systems for the protection and use of air and water resources.

The civil engineering student has the opportunity to obtain a broad background in mathematics and the physical sciences and their applications to all areas of civil engineering. This flexible curriculum allows the student to elect eighteen semester hours of approved technical coursework to emphasize the areas of civil engineering of most interest to the student. In addition, courses in the humanities and social sciences are included.

To excel as a civil engineer, a student should have an aptitude for mathematics and science, an interest in the practical application of technical knowledge to societal problems, the motivation to study and prepare for engineering practice, and the desire to be a professional. Civil engineering graduates of the University may seek a wide variety of positions in planning, design, and construction with government agencies, industry, and private consulting firms. Those who plan to pursue graduate work in engineering, or in other professions such as business, medicine, law, or journalism, have an excellent base on which to build.

## Program Outcomes

Graduates of the civil engineering program should attain the following outcomes:

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- An ability to function on multidisciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts
- Recognition of the need for and an ability to engage in lifelong learning

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses	Sem	Hrs
<b>Basic Sequence Courses</b>		
• Chemistry 301, 302 (Chemistry 301 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)		6
• Civil Engineering 301, 311K, 311S, 314K, 319F		15
• Engineering Mechanics 306, 319		6
• Mathematics 408C, 408D (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; it carries a quantitative reasoning flag.)		8

- Mechanical Engineering 210 2
- Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.) 8
- Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum.) 3
- Undergraduate Studies 302 or 303 (some sections carry a writing flag) 3

**Total 51**

**Major Sequence Courses**

Base level courses:

- Architectural Engineering 323K 3
- Civil Engineering 321, 329, 341, 356, 357 15
- Civil Engineering 333T, 171P (Civil Engineering 333T carries a writing flag.) (Civil Engineering 171P carries an ethics and leadership flag.) 4
- Level I electives 15
- Level II elective 3

**Total 40**

**Other Required Courses**

- Mathematics 427K (carries a quantitative reasoning flag) 4
- Engineering Mechanics 311M or Mechanical Engineering 320 3
- Approved science elective 3
- Approved mathematics, science, or engineering science elective 3

**Total 13**

**Remaining Core Curriculum Courses**

- English 316K (humanities) 3
- American and Texas government 6
- American history 6
- Social and behavioral sciences 3
- Visual and performing arts 3

**Total 21**

**Minimum Required 125**

at least one technical elective from each of three different areas of specialization must be included in each student's program.

Each student must take at least one technical area option level II elective. Level II electives may be substituted for technical area option level I electives, but the requirement of at least one technical elective from each of three different areas of specialization still applies.

The following lists reflect current course offerings and are subject to change by the faculty. Current lists are available in the departmental undergraduate office.

**Level I Electives**

*Construction Engineering and Project Management*  
 Architectural Engineering 358, *Cost Estimating in Building Construction*  
 Architectural Engineering 366, *Contracts, Liability, and Ethics* (carries an ethics and leadership flag)

*Construction Materials*  
 Civil Engineering 351, *Concrete Materials*  
 Civil Engineering 366K, *Design of Bituminous Mixtures*

*Environmental Engineering*  
 Civil Engineering 342, *Water and Wastewater Treatment Engineering*  
 Civil Engineering 346, *Solid Waste Engineering and Management*  
 Civil Engineering 369L, *Air Pollution Engineering*  
 Civil Engineering 370K, *Environmental Sampling and Analysis*

*Geotechnical Engineering*  
 Civil Engineering 375, *Earth Slopes and Retaining Structures*

*Structures*  
 Architectural Engineering 345K, *Masonry Engineering*  
 Architectural Engineering 362L, *Structural Design in Wood*  
 Civil Engineering 331, *Reinforced Concrete Design*  
 Civil Engineering 335, *Elements of Steel Design*  
 Civil Engineering 363, *Advanced Structural Analysis*

*Transportation*  
 Civil Engineering 367P, *Pavement Design and Performance*  
 Civil Engineering 367T, *Traffic Engineering*

*Water Resources*  
 Civil Engineering 358, *Introductory Ocean Engineering*  
 Civil Engineering 374K, *Hydrology*  
 Civil Engineering 374L, *Groundwater Hydraulics*

**Level II Electives (Design)**

*Environmental Engineering*  
 Civil Engineering 364, *Design of Wastewater and Water Treatment Facilities* (carries an independent inquiry flag)

*Geotechnical Engineering*  
 Civil Engineering 360K, *Foundation Engineering* (carries an independent inquiry flag)

*Structures*  
 Civil Engineering 362M, *Advanced Reinforced Concrete Design* (carries an independent inquiry flag)  
 Civil Engineering 362N, *Advanced Steel Design* (carries an independent inquiry flag)

*Transportation*  
 Civil Engineering 367, *Highway Engineering* (carries an independent inquiry flag)

**Level I and Level II Technical Electives**

The civil engineering curriculum does not require the student to declare a specific technical area option. However, for the guidance of students with particular interests, level I electives in civil engineering are listed in areas of specialization. The fifteen semester hours of level I electives must be chosen from the following civil engineering and architectural engineering courses; in special cases, with the written permission of the department chair, this requirement may be relaxed, provided the student demonstrates in advance that the courses to be substituted for civil engineering or architectural engineering courses are part of a consistent educational plan. To provide a broad general background,

*Water Resources*

Civil Engineering 365K, *Hydraulic Engineering Design* (carries an independent inquiry flag)

## Suggested Arrangement of Courses

Courses	Sem	Hrs
<b>First Year</b>		
<b>Fall</b>		
Civil Engineering 301, <i>Civil Engineering Systems</i>	3	3
Chemistry 301, <i>Principles of Chemistry I</i>	3	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4	4
Mechanical Engineering 210, <i>Engineering Design Graphics</i>	2	2
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3	3
		<b>Total 15</b>
<b>Spring</b>		
Chemistry 302, <i>Principles of Chemistry II</i>	3	3
Engineering Mechanics 306, <i>Statics</i>	3	3
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4	4
Physics 303K, <i>Engineering Physics I</i>	3	3
Physics 103M, <i>Laboratory for Physics 303K</i>	1	1
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3	3
		<b>Total 17</b>
<b>Second Year</b>		
<b>Fall</b>		
Civil Engineering 311K, <i>Introduction to Computer Methods</i>	3	3
Engineering Mechanics 311M, <i>Dynamics or Mechanical Engineering 320, Applied Thermodynamics</i>	3	3
Engineering Mechanics 319, <i>Mechanics of Solids</i>	3	3
Physics 303L, <i>Engineering Physics II</i>	3	3
Physics 103N, <i>Laboratory for Physics 303L</i>	1	1
Social and behavioral sciences or visual and performing arts (may be taken in any semester)	3	3
		<b>Total 16</b>
<b>Spring</b>		
Civil Engineering 311S, <i>Probability and Statistics for Civil Engineers</i>	3	3
Civil Engineering 314K, <i>Properties and Behavior of Engineering Materials</i>	3	3
Civil Engineering 319F, <i>Elementary Mechanics of Fluids</i>	3	3
English 316K, <i>Masterworks of Literature</i>	3	3
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4	4
		<b>Total 16</b>
<b>Third Year</b>		
<b>Fall</b>		
Approved mathematics, science, or engineering science elective	3	3

Base level courses	9
American history	3
<b>Total 15</b>	
<b>Spring</b>	
American history	3
Base level courses	9
Approved science elective	3
<b>Total 15</b>	
<b>Fourth Year</b>	
<b>Fall</b>	
Civil Engineering 333T, <i>Engineering Communication</i>	3
Level I electives	9
American government	3
<b>Total 15</b>	
<b>Spring</b>	
Civil Engineering 171P, <i>Engineering Professionalism</i>	1
Level I electives	6
Level II elective	3
American and Texas government	3
Social and behavioral sciences or visual and performing arts (may be taken in any semester)	3
<b>Total 16</b>	

## Bachelor of Science in Electrical Engineering

Students seeking the Bachelor of Science in Electrical Engineering pursue one of two curricula—electrical engineering or computer engineering. Both curricula contain the fundamentals of electrical engineering and computer engineering; they differ in their technical core requirements in order to suit different career objectives.

The curricula in electrical engineering and computer engineering are designed to educate students in the fundamentals of engineering, which are built upon a foundation of mathematics, science, communication, and the liberal arts. Graduates should be equipped to advance their knowledge while contributing professionally to a rapidly changing technology. Areas in which electrical and computer engineers contribute significantly are: communications, signal processing, networks and systems, electronics and integrated circuits, energy systems and renewable energy, fields, waves and electromagnetic systems, nanoelectronics and nanotechnology, computer architecture and embedded systems, and software engineering and design. Typical career paths of graduates include design, development, management, consulting, teaching, and research. Many graduates seek further education in law, medicine, business, or engineering.

The core requirements of the Bachelor of Science in Electrical Engineering provide a foundation of engineering fundamentals. Students then build on the core requirements by choosing a primary and a secondary technical core area; students also choose two advanced laboratory courses. Once the primary technical core area is chosen, the student is assigned a faculty adviser with expertise in that area to help the student select technical area courses that are appropriate to his or her career and educational goals. The curriculum thus ensures breadth through the core courses and the choice of a



technical elective; technical core area coursework provides additional depth.

## Program Outcomes

Electrical and computer engineering graduates should demonstrate

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as analyze and interpret data
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- An ability to function on multidisciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility
- An ability to communicate effectively
- The broad education necessary to understand what impact engineering solutions have in global, economic, environmental, and societal contexts
- A recognition of the need for and an ability to engage in lifelong learning
- A knowledge of contemporary issues
- An ability to use techniques, skills, and modern engineering tools necessary for engineering practice

## Program Educational Objectives

Within a few years of graduation, electrical and computer engineering graduates should

- Contribute to the economic development of Texas and beyond through the ethical practice of electrical and computer engineering in industry and public service
- Exhibit leadership in technical or business activity through engineering ability, communication skills, and knowledge of contemporary and global issues
- Continue to educate themselves through professional study and personal research
- Be prepared for admission to, and to excel in, the best graduate programs in the world
- Design systems to collect, encode, store, transmit, and process energy and information, and to evaluate system performance, either individually or in teams
- Use their engineering ability and creative potential to create technology that will improve the quality of life in society

## Portable Computing Devices

Students enrolled in a degree program in Electrical and Computer Engineering will be expected to own a portable computing device (i.e. a notebook computer, tablet, or slate) suitable for use in the classroom and on the University wireless network. Use of these devices in the classroom and as a general part of the learning experience within our programs is at the discretion of faculty and not all classes or courses of instruction will require the use of these devices. Once admitted,

students will be informed by the Electrical and Computer Engineering Department office about specific device requirements.

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one course with a quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*. More information about flags is given in Skills and Experiences Flags (p. 24).

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill technical core, math and/or science technical elective, and other elective requirements must be approved by the electrical and computer engineering faculty before the student enrolls in them.

Transfer Coursework: No more than 25 semester credit hours of transfer electrical engineering coursework may be counted for credit toward the electrical engineering degree.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Mathematics 408C, 408D, 427K, 340L (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	15
• Electrical Engineering 302, 306, 411, 312, 313, 319K (Electrical Engineering 302 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	19
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8

- Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum.) 3

**Total 45**

### Major Sequence Courses

- Electrical Engineering 333T, 351K, 364D, and one of the following senior design project courses: Electrical Engineering 464G, 464H, 464K, 464R. (Electrical Engineering 333T carries a writing flag; the design project courses carry independent inquiry flags.) 13
- Primary technical core: Core courses (six hours), core laboratory course (four hours), advanced mathematics course (four hours) 14
- Primary core electives: Four courses (twelve to fourteen hours) 12
- Secondary technical core: Core courses (six hours), core laboratory course (four hours), advanced mathematics course (four hours) 14

**Total 53**

### Other Required Courses

- Approved elective 3

### Remaining Core Curriculum Courses

- English 316K (humanities) 3
- American and Texas government 6
- American history 6
- Visual and performing arts 3
- Social and behavior sciences 3
- Undergraduate Studies 302 or 303 (some sections carry a writing flag) 3

**Total 24**

**Minimum Required 125**

## Upper-Division Technical Core Areas

Both electrical engineering and computer engineering students must choose a primary and a secondary technical core area. Electrical engineering students must choose their primary technical core area from the electrical engineering technical core areas listed below; computer engineering students must choose their primary technical core area from the computer engineering core areas. For the secondary technical core area, students may choose any technical core area, including academic enrichment.

For all technical core areas, the student must complete all courses in the core area on the letter-grade basis. A course may not be counted toward more than one technical core area.

In cases where a single electrical engineering course appears on both the primary and secondary technical core area list, the student must replace the secondary technical core area course with an elective from the same secondary technical core area list. In the case of a duplicate mathematics course, the student must choose an approved mathematics or science course to replace it.

### Academic Enrichment Technical Core Area

A student may choose the academic enrichment technical core area, but only as his or her secondary technical core area. For this core

area, the student selects a minimum of fourteen hours of elective coursework to support his or her personal or career goals, which must include an upper-division course in either mathematics or science. Before registering for these courses, the student must prepare a career plan statement and a list of relevant electives; this plan must be approved by the undergraduate adviser.

These electives may include traditional upper-division technical courses in electrical engineering and other engineering fields; courses in other fields at the University that satisfy degree requirements, such as business, economics, communication, music, and philosophy; or research done with a faculty member in Electrical Engineering 360, *Special Problems in Electrical and Computer Engineering*. The courses must be completed in residence; courses in an approved study abroad program require the approval of the undergraduate adviser. The fourteen elective course hours must include at least eleven hours of upper-division coursework; they may include Electrical Engineering 155R, *Undergraduate Research Seminar*, and Electrical Engineering 325L, *Cooperative Engineering*, or up to three hours in Electrical Engineering 125S, *Internship in Electrical and Computer Engineering*, but not both. Students selecting software engineering and design as their primary technical core and academic enrichment as their secondary technical core must also ensure that their program of work includes adequate hardware coursework. That is:

1. If the senior design project consists of software only, then the electives include at least two of the following: Electrical Engineering 316, Electrical Engineering 445L, Electrical Engineering 445M.
2. If the senior design project involves a significant hardware design component, then the electives must include at least one of the following: Electrical Engineering 316, Electrical Engineering 445L, Electrical Engineering 445M.

### Electrical Engineering Technical Cores

*Communications, Signal Processing, Networks, and Systems*  
Communications, signal processing, networks, and systems broadly encompasses the principles underlying the design and implementation of systems for information transmission. The field considers how information is represented, compressed, and transmitted on wired and wireless links and how communication networks can be, and are, designed and operated. A student who chooses this technical core area should recognize that communications and networking is a broad application domain where many engineering tools come into play: from circuit design for wireless phones to embedded network processors to system and application software for networked systems.

Students complete the following:

1. Electrical Engineering 325, *Electromagnetic Engineering*
2. Either Electrical Engineering 351M, *Digital Signal Processing* or Electrical Engineering 362K, *Introduction to Automatic Control*
3. Core laboratory course: Electrical Engineering 445S, *Real-Time Digital Signal Processing Laboratory*
4. Core mathematics course: Mathematics 427L, *Advanced Calculus for Applications II*
5. Four courses from the following list:  
Electrical Engineering 325K, *Antennas and Wireless Propagation*  
Electrical Engineering 351M, *Digital Signal Processing*  
Electrical Engineering 360C, *Algorithms*  
Electrical Engineering 360K, *Introduction to Digital Communications*  
Electrical Engineering 361M, *Introduction to Data Mining*

Electrical Engineering 362K, *Introduction to Automatic Control*  
 Electrical Engineering 363M, *Microwave and Radio Frequency Engineering*  
 Electrical Engineering 370K, *Computer Control Systems*  
 Electrical Engineering 370N, *Introduction to Robotics and Mechatronics*  
 Electrical Engineering 471C, *Wireless Communications Laboratory*  
 Electrical Engineering 371R, *Digital Image and Video Processing*  
 Electrical Engineering 372N, *Telecommunication Networks*  
 Mathematics 325K, *Discrete Mathematics*  
 Mathematics 362M, *Introduction to Stochastic Processes* (carries a quantitative reasoning flag)  
 Mathematics 365C, *Real Analysis I*

#### *Electronics and Integrated Circuits*

The electronics and integrated circuits technical core area involves the design and analysis of the circuits that provide the functionality of a system. The types of circuits that students encounter include analog and digital integrated circuits, radio frequency circuits, mixed signal (combination of analog and digital) circuits, power electronics, and biomedical electronics. The design and implementation of integrated circuits and systems using analog and digital building blocks are included in this core area. A student should choose this technical core area if he or she is interested in designing chips for applications, such as computing, telecommunications, and signal processing.

Students complete the following:

1. Electrical Engineering 325, *Electromagnetic Engineering*
2. Electrical Engineering 339, *Solid-State Electronic Devices*
3. Core laboratory course: Electrical Engineering 438, *Fundamentals of Electronic Circuits*
4. Core mathematics course: Mathematics 427L, *Advanced Calculus for Applications II*
5. Electrical Engineering 316, *Digital Logic Design*
6. Three courses from the following list:  
 Electrical Engineering 321K, *Mixed Signal and Circuits Laboratory*  
 Electrical Engineering 338K, *Analog Electronics*  
 Electrical Engineering 338L, *Analog Integrated Circuit Design*  
 Electrical Engineering 440, *Integrated Circuit Nanomanufacturing Techniques*  
 Electrical Engineering 445L, *Embedded Systems Design Laboratory*  
 Electrical Engineering 445S, *Real-Time Digital Signal Processing Laboratory*  
 Electrical Engineering 460M, *Digital Systems Design Using HDL*  
 Electrical Engineering 460N, *Computer Architecture*  
 Electrical Engineering 460R, *Introduction to VLSI Design*  
 Electrical Engineering 360S, *Digital Integrated Circuit Design*  
 Electrical Engineering 361R, *Radio-Frequency Electronics*  
 Electrical Engineering 363M, *Microwave and Radio Frequency Engineering*  
 Electrical Engineering 374K, *Biomedical Electronic Instrument Design*  
 Electrical Engineering 374L, *Applications of Biomedical Engineering*

#### *Energy Systems and Renewable Energy*

This technical core area provides the foundation for a career in electric power systems, generation, grid operation, motors and drives, and renewable energy sources. This core area involves the study and

design of reliable and economic electric power systems, including both traditional and renewable resources. Energy conversion involves conversion to and from electrical energy, including the study and design of electrical machines.

Students complete the following:

1. Electrical Engineering 325, *Electromagnetic Engineering*
2. Electrical Engineering 368L, *Power Systems Apparatus and Laboratory* or Electrical Engineering 369, *Power Systems Engineering*
3. Core laboratory course: Electrical Engineering 462L, *Power Electronics Laboratory*
4. Core mathematics course: Mathematics 427L, *Advanced Calculus for Applications II*
5. Electrical Engineering 362K, *Introduction to Automatic Control*
6. Three courses from the following list:  
 Electrical Engineering 339, *Solid-State Electronic Devices*  
 Electrical Engineering 341, *Electric Drives and Machines*  
 Electrical Engineering 362Q, *Power Quality and Harmonics*  
 Electrical Engineering 362R, *Renewable Energy and Power Systems*  
 Electrical Engineering 362S, *Development of a Solar-Powered Vehicle*  
 Electrical Engineering 368L, *Power Systems Apparatus and Laboratory*  
 Electrical Engineering 369, *Power Systems Engineering*  
 Electrical Engineering 379K, Topic 4: *Solar Energy Conversion Devices*  
 Mechanical Engineering 337C, *Introduction to Nuclear Power Systems*

#### *Fields, Waves, and Electromagnetic Systems*

Students in this technical core area study different aspects of applied electromagnetics, including antennas, radio wave propagation, microwave and radio frequency circuits and transmission structures, optical components and lasers, and engineering acoustics. A student should choose the electromagnetic engineering core area if he or she is interested in engineering that involves the physical layer in modern communication and radar systems. Graduates are well positioned for jobs in antenna design and testing, propagation channel characterization, microwave and radio frequency circuit design, electromagnetic emission testing from electronic devices and systems, radar system design and development, optical telecommunication, optical information and signal processing systems, and component design and development.

Students complete the following:

1. Electrical Engineering 325, *Electromagnetic Engineering*
2. Electrical Engineering 339, *Solid-State Electronic Devices*
3. Core laboratory course: Electrical Engineering 438, *Fundamentals of Electronic Circuits* or Electrical Engineering 462L, *Power Electronics Laboratory*
4. Core mathematics course: Mathematics 427L, *Advanced Calculus for Applications II*
5. Either Electrical Engineering 325K, *Antennas and Wireless Propagation* or Electrical Engineering 363M, *Microwave and Radio Frequency Engineering*
6. Three courses from the following list:  
 Electrical Engineering 321K, *Mixed Signal and Circuits Laboratory*

Electrical Engineering 325K, *Antennas and Wireless Propagation*  
Electrical Engineering 334K, *Quantum Theory of Electronic Materials*

Electrical Engineering 341, *Electric Drives and Machines*

Electrical Engineering 347, *Modern Optics*

Electrical Engineering 348, *Laser and Optical Engineering*

Electrical Engineering 361R, *Radio-Frequency Electronics*

Electrical Engineering 363M, *Microwave and Radio Frequency Engineering*

Electrical Engineering 363N, *Engineering Acoustics*

Electrical Engineering 369, *Power Systems Engineering*

Electrical Engineering 374K, *Biomedical Electronic Instrument Design*

Electrical Engineering 374L, *Applications of Biomedical Engineering*

#### *Nanoelectronics and Nanotechnology*

Students in this technical core area learn about the materials and devices used in modern electronic and optoelectronic systems.

Through required and electives courses, students learn about the fundamentals of charge transport and interactions with light in semiconductors. They learn about devices beginning with diodes and transistors, the building blocks of integrated circuits, and extending to photodiodes, semiconductor lasers, photodetectors and photovoltaic devices. They learn about microelectronics fabrication techniques. And they are introduced to quantum mechanics, particularly as it applies to electronic and optoelectronic materials and devices. Students may also explore device applications through digital and analog circuit design. With exposure to the topics in this area, students are well positioned to work in a wide variety of fields that rely on semiconductor devices, such as computers, telecommunications, the automotive industry, and consumer electronics.

Students complete the following:

1. Electrical Engineering 325, *Electromagnetic Engineering*
2. Electrical Engineering 339, *Solid-State Electronic Devices*
3. Core laboratory course: Electrical Engineering 440, *Integrated Circuit Nanomanufacturing Techniques*
4. Core mathematics course: Mathematics 427L, *Advanced Calculus for Applications II*
5. Four courses from the following list:  
Electrical Engineering 334K, *Quantum Theory of Electronic Materials*  
Electrical Engineering 438, *Fundamentals of Electronic Circuits*  
Electrical Engineering 338L, *Analog Integrated Circuit Design*  
Electrical Engineering 347, *Modern Optics*  
Electrical Engineering 348, *Laser and Optical Engineering*  
Electrical Engineering 360S, *Digital Integrated Circuit Design*  
Electrical Engineering 379K, Topic 4: *Solar Energy Conversion Devices*

#### **Computer Engineering Technical Core Areas**

##### *Computer Architecture and Embedded Systems*

Computer architecture involves understanding the operation and design of computers on many different levels. These levels include the instruction set, microarchitecture, and logic design. Embedded systems represent the combination of software and hardware that are designed to perform specific functions. These systems may be stand-alone items or an integral part of a larger system. Within this technical core area, students are exposed to logic design, programming, computer architecture, systems design, and digital signal processing. The student studying computer architecture will be well positioned to

join the microprocessor design industry as a logic designer or a circuit designer. After a good deal of experience on the job, the student would be well positioned to become the chief architect of a new design.

Jobs in embedded systems involve defining, designing, and fabricating application-specific processors and computers in areas such as automotive electronics, consumer devices, and telecommunications.

Students complete the following:

1. Electrical Engineering 316, *Digital Logic Design*
2. Electrical Engineering 460N, *Computer Architecture*
3. Core laboratory course: Electrical Engineering 445L, *Embedded Systems Design Laboratory*
4. Core mathematics course: Mathematics 325K, *Discrete Mathematics*
5. Electrical Engineering 360C, *Algorithms*
6. Three courses from the following list:  
Electrical Engineering 422C, *Software Design and Implementation II*  
Electrical Engineering 445M, *Embedded and Real-Time Systems Laboratory*  
Electrical Engineering 445S, *Real-Time Digital Signal Processing Laboratory*  
Electrical Engineering 460M, *Digital Systems Design Using HDL*  
Electrical Engineering 360P, *Concurrent and Distributed Systems*  
Electrical Engineering 460R, *Introduction to VLSI Design*  
Electrical Engineering 362K, *Introduction to Automatic Control*  
Computer Science 375, *Compilers*

##### *Software Engineering and Design*

Courses in this area cover the engineering life cycle of software systems, including requirement analysis and specification, design, construction/programming, testing, deployment, maintenance, and evolution. Area courses are intended to teach students theory, practical methods, and tools for designing, building, delivering, maintaining, and evolving software to meet stakeholder requirements. Every software engineer must understand how software systems operate and how they can be used to solve engineering problems and deliver solutions. The courses in this area are designed to educate students about a diverse and relevant set of technologies and about the ways that technology can be used to design and build software systems.

Students complete the following:

1. Electrical Engineering 422C, *Software Design and Implementation II*
2. Electrical Engineering 360C, *Algorithms*
3. Core laboratory course: Electrical Engineering 461L, *Software Engineering and Design Laboratory*
4. Core mathematics course: Mathematics 325K, *Discrete Mathematics*
5. Four courses from the following list:  
Electrical Engineering 316, *Digital Logic Design*  
Electrical Engineering 445L, *Embedded Systems Design Laboratory*  
Electrical Engineering 445M, *Embedded and Real-Time Systems Laboratory*  
Electrical Engineering 360F, *Introduction to Software Engineering*  
Electrical Engineering 460N, *Computer Architecture*  
Electrical Engineering 360P, *Concurrent and Distributed Systems*  
Electrical Engineering 361Q, *Requirements Engineering*



Electrical Engineering 372N, *Telecommunication Networks*  
 Electrical Engineering 360T, *Software Testing*  
 Electrical Engineering 361M, *Introduction to Data Mining*

**Alternate Mathematics Courses**

For students who choose both primary and secondary technical core areas in computer engineering:

Mathematics 427L, *Advanced Calculus for Applications II*  
 Mathematics 328K, *Introduction to Number Theory*  
 Mathematics 343K, *Introduction to Algebraic Structures*  
 Mathematics 344K, *Intermediate Symbolic Logic*  
 Mathematics 348, *Scientific Computation in Numerical Analysis* (carries a quantitative reasoning flag)  
 Mathematics 358K, *Applied Statistics* (carries a quantitative reasoning flag)  
 Mathematics 374M, *Mathematical Modeling in Science and Engineering*  
 Computer Science 341, *Automata Theory*  
 Computer Science 346, *Cryptography*

For students who choose both primary and secondary technical core areas in electrical engineering:

Mathematics 325K, *Discrete Mathematics*  
 Mathematics 328K, *Introduction to Number Theory*  
 Mathematics 346, *Applied Linear Algebra*  
 Mathematics 348, *Scientific Computation in Numerical Analysis* (carries a quantitative reasoning flag)  
 Mathematics 358K, *Applied Statistics* (carries a quantitative reasoning flag)  
 Mathematics 361, *Theory of Functions of a Complex Variable*  
 Mathematics 362M, *Introduction to Stochastic Processes*  
 Mathematics 372K, *Partial Differential Equations and Applications*  
 Mathematics 374, *Fourier and Laplace Transforms*  
 Mathematics 374M, *Mathematical Modeling in Science and Engineering*

## Suggested Arrangement of Courses

### Electrical and Computer Engineering Curriculum

Courses	Sem Hrs
<b>First Year</b>	
<b>Fall</b>	
Electrical Engineering 302, <i>Introduction to Electrical Engineering</i>	3
Electrical Engineering 306, <i>Introduction to Computing</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total 16</b>	

<b>Spring</b>	
Electrical Engineering 319K, <i>Introduction to Embedded Systems</i>	3
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
Physics 303K, <i>Engineering Physics I</i>	3
Physics 103M, <i>Laboratory for Physics 303K</i>	1
Visual and performing arts or social and behavioral sciences	3
<b>Total 14</b>	

### Second Year

<b>Fall</b>	
Electrical Engineering 411, <i>Circuit Theory</i>	4
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4
Physics 303L, <i>Engineering Physics II</i>	3
Physics 103N, <i>Laboratory for Physics 303L</i>	1
Visual and performing arts or social and behavioral sciences	3
<b>Total 15</b>	

### Spring

English 316K, <i>Masterworks of Literature</i>	3
Electrical Engineering 312, <i>Software Design and Implementation I</i>	3
Electrical Engineering 313, <i>Linear Systems and Signals</i>	3
Government 310L, <i>American Government</i>	3
Mathematics 340L, <i>Matrices and Matrix Calculations</i>	3
<b>Total 15</b>	

### Third Year

<b>Fall</b>	
Electrical Engineering 333T, <i>Engineering Communication</i>	3
Electrical Engineering 351K, <i>Probability and Random Processes</i>	3
Primary technical core (mathematics)	3 or 4
Primary technical core laboratory	4
Primary technical core requirement	3 or 4
<b>Total 16 to 18</b>	

### Spring

Secondary technical core (mathematics)	3 or 4
Secondary technical core laboratory	4
Secondary technical core requirement	3 or 4
Primary technical core requirement	3
Primary technical core (requirement or elective)	3
<b>Total 16 to 18</b>	

### Fourth Year

<b>Fall</b>	
Electrical Engineering 364D, <i>Introduction to Engineering Design</i>	3
American history	3
Secondary technical core requirement	6
Primary technical core electives	3
<b>Total 15</b>	

## Spring

Electrical Engineering 464C, <i>Corporate Senior Design Project</i> ; Electrical Engineering 464G, <i>Multidisciplinary Senior Design Project</i> , Electrical Engineering 464H, <i>Honors Senior Design Project</i> ; Electrical Engineering 464K, <i>Senior Design Project</i> ; or Electrical Engineering 464R, <i>Research Senior Design Project</i>	4
Government 312L, <i>Issues and Policies in American Government</i>	3
American history	3
Primary technical core elective	3
Approved elective	3
<b>Total 16</b>	

- Basic engineering and geologic topics that develop a working knowledge of fluid mechanics, strength of materials, transport phenomena, material properties, phase behavior, and thermodynamics
- Engineering and geosciences topics that develop competence in characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods, including field methods; design and analysis of systems for producing, injecting, and handling fluids; application of hydrogeologic and reservoir engineering principles and practices for water and energy resource development and management; contamination evaluation and remediation methods for hydrologic resources; and use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty
- A major capstone design experience that prepares students for engineering and hydrogeologic practice, based on the knowledge and skills acquired in earlier coursework and incorporating engineering and geological standards and realistic constraints

# Bachelor of Science in Geosystems Engineering and Hydrogeology

Geosystems engineers and hydrogeologists are concerned with the development and use of engineering approaches in the management of natural resources from the earth's surface and subsurface, environmental restoration of subsurface sites, and other processes related to the earth sciences. This degree program, offered jointly by the Cockrell School of Engineering and the Jackson School of Geosciences, is designed to teach students the geological and engineering principles needed to solve subsurface resource development and environmental problems. The curriculum includes a fundamental sequence of engineering and geological sciences courses in such areas as multiphase fluid flow, physical hydrology, heat and mass transfer, field methods, and engineering design. This interdisciplinary systems approach, combining engineering and geological sciences, is increasingly required to address complex real-world problems such as characterization and remediation of aquifers. The degree program is designed to prepare graduates for employment with environmental, water resource management, and energy companies in addition to many government agencies. Better-qualified graduates of the program may pursue graduate study in subsurface environmental engineering, petroleum engineering, geology, and other related fields.

The objective of the degree program is to prepare graduates for successful careers in the fields of subsurface environmental engineering (including carbon dioxide sequestration), oil and gas production and services, or similar pursuits. Graduates are expected to understand the fundamental principles of science and engineering behind the technology of geosystems engineering and hydrogeology to keep their education from becoming outdated and to give them the capability of self-instruction after graduation. They should also be prepared to serve society by applying the ideals of ethical behavior, professionalism, and environmentally responsible stewardship of natural resources.

Containing the following elements, the technical curriculum provides both breadth and depth in a range of topics.

- A combination of college-level mathematics and basic sciences (some with experimental work) that includes mathematics through differential equations, physics, chemistry, and geology

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one course with a quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and both writing flags are carried by courses specifically required for the degree; these courses are identified below. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill nontechnical elective requirements must be approved by the petroleum and geosystems engineering faculty and the geological sciences faculty before the student registers for them.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Chemistry 301, 302 (Chemistry 301 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	6
• Engineering Mechanics 306, 319	6
• Geological Sciences 303, 416K, 416M	11

- Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.) 12
- Petroleum and Geosystems Engineering 310, 312, 322K, 333T (Petroleum and Geosystems Engineering 333T carries a writing flag and an ethics and leadership flag) 12
- Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.) 8
- Rhetoric and Writing 306 (may be counted toward the English composition requirement of the core curriculum) 3

**Total 58**

#### Major Sequence Courses

- Geological Sciences 420K, 428, 468K, 476K, 376L, 376S (Geological Sciences 476K carries a writing flag.) 22
- Petroleum and Geosystems Engineering 323K, 323L, 323M, 424, 326, 365, 368, 373L (Petroleum and Geosystems 373L carries an independent inquiry flag.) 25
- Civil Engineering 357 3

**Total 50**

#### Remaining Core Curriculum Courses

- English 316K (humanities) 3
- American and Texas government 6
- American history 6
- Visual and performing arts 3
- Social and behavioral sciences 3
- Undergraduate Studies 302 or 303 (some sections carry a writing flag) 3

**Total 24**

**Minimum Required 132**

- Engineering Mechanics 306, *Statics* 4
- Mathematics 408D, *Sequences, Series, and Multivariable Calculus* 4
- Physics 303K, *Engineering Physics I* 3
- Physics 103M, *Laboratory for Physics 303K* 1
- American history 3

**Total 17**

#### Second Year

##### Fall

- Geological Sciences 416M, *Sedimentary Rocks* 4
- Geological Sciences 416K, *Earth Materials* 4
- Mathematics 427K, *Advanced Calculus for Applications I* 4
- Petroleum and Geosystems Engineering 310, *Formulation and Solution of Geosystems Engineering Problems* 3

**Total 15**

##### Spring

- Engineering Mechanics 319, *Mechanics of Solids* 3
- Petroleum and Geosystems Engineering 312, *Physical and Chemical Behavior of Fluids I* 3
- Petroleum and Geosystems Engineering 322K, *Transport Phenomena in Geosystems* 3
- Petroleum and Geosystems Engineering 333T, *Engineering Communication* 3
- Physics 303L, *Engineering Physics II* 3
- Physics 103N, *Laboratory for Physics 303L* 1

**Total 16**

#### Third Year

##### Fall

- Geological Sciences 476K, *Groundwater Hydrology* 4
- Petroleum and Geosystems Engineering 323K, *Reservoir Engineering I: Primary Recovery* 3
- Petroleum and Geosystems Engineering 424, *Petrophysics* 4
- Petroleum and Geosystems Engineering 326, *Thermodynamics and Phase Behavior* 3
- Social and behavioral sciences 3

**Total 17**

##### Spring

- Civil Engineering 357, *Geotechnical Engineering* 3
- Geological Sciences 420K, *Introduction to Field and Stratigraphic Methods* 4
- Petroleum and Geosystems Engineering 323L, *Reservoir Engineering II: Secondary and Tertiary Recovery* 3
- Petroleum and Geosystems Engineering 368, *Fundamentals of Well Logging* 3
- American and Texas government 3

**Total 16**

##### Summer

- Geological Sciences 376L, *Field Methods in Groundwater Hydrology* 3

**Total 3**

#### Fourth Year

##### Fall

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
<b>Fall</b>	
Chemistry 301, <i>Principles of Chemistry I</i>	3
Geological Sciences 303, <i>Introduction to Geology</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total 16</b>	
<b>Spring</b>	
Chemistry 302, <i>Principles of Chemistry II</i>	3

English 316K, <i>Masterworks of Literature</i>	3
Geological Sciences 428, <i>Structural Geology</i>	4
Geological Sciences 376S, <i>Physical Hydrology</i>	3
Petroleum and Geosystems Engineering 323M, <i>Reservoir Engineering III: Numerical Simulation</i>	3
Petroleum and Geosystems Engineering 365, <i>Resource Economics and Valuation</i>	3

**Total 16**

### Spring

Geological Sciences 468K, <i>Geophysics for Geological Sciences Majors</i>	4
Petroleum and Geosystems Engineering 373L, <i>Geosystems Engineering Design and Analysis II</i>	3
American history	3
American and Texas government	3
Visual and performing arts	3

**Total 16**

## Bachelor of Science in Mechanical Engineering

Mechanical engineers are broadly concerned with the engineering systems used to control and transform energy to meet the needs of humanity. They design, develop, and produce devices and systems from space probes to washing machines, from turbojet engines to lawn mowers, from automatic machine tools and vending machines to computer-controlled systems. Because mechanical engineering is one of the broadest-based fields of technical study, it is also an excellent foundation for further education in business, law, medicine, and other professions that require a good working knowledge of science and technology.

The mechanical engineering department is dedicated to graduating mechanical engineers who practice mechanical engineering in the general stems of thermal/fluid systems, mechanical systems and design, and materials and manufacturing in industry and government settings; pursue advanced education, research and development, and other creative efforts in science and technology; conduct themselves in a responsible, professional, and ethical manner; and participate as leaders in activities that support service to and economic development of the region, state, and nation.

The mechanical engineering faculty has defined ten educational outcomes that students in the program are expected to achieve by the time of graduation. These outcomes are

- Knowledge of and ability to apply engineering and science fundamentals to real problems
- Ability to formulate and solve open-ended problems
- Ability to design mechanical components, systems, and processes
- Ability to set up, conduct, and interpret experiments, and to present the results in a professional manner
- Ability to use modern computer tools in mechanical engineering
- Ability to communicate in written, oral, and graphical forms
- Ability to work in teams and apply interpersonal skills in engineering contexts

- Ability and desire to lay a foundation for continued learning beyond the baccalaureate degree
- Awareness of professional issues in engineering practice, including ethical responsibility, safety, the creative enterprise, and loyalty and commitment to the profession
- Awareness of contemporary issues in engineering practice, including economic, social, political, and environmental issues and global impact

The mechanical engineering curriculum meets these outcomes by providing breadth and depth across a range of topics.

- A combination of college-level mathematics and basic science courses (some with experimental work) that includes mathematics through differential equations, probability and statistics, physics, and chemistry
- Engineering courses that develop a working knowledge of graphics and computer-aided design, engineering mechanics, thermodynamics, kinematics, dynamics and control of mechanical systems, computational methods, fluid mechanics, heat transfer, materials science and engineering, electric circuits and electronics, technical communication, and engineering economics
- Mechanical engineering project and laboratory experiences that develop competence in measurements and instrumentation, interpretation of data, reverse engineering analysis of mechanical systems, use of computational tools for engineering analysis, integration of multidisciplinary topics in design of complex systems, teamwork and project planning, and written and oral communication
- A sequence of engineering design courses, culminating in a major capstone design experience in collaboration with an industrial sponsor, that draws on the knowledge and skills students have acquired in earlier coursework and incorporates modern engineering standards and realistic constraints
- Core curriculum courses, including social and behavioral sciences, humanities, and visual and performing arts electives, that complement the technical content of the curriculum
- A variety of senior elective options that provide a career gateway to further study and lifelong learning in the practice of engineering and other professions

## PROCEED (Project-Centered Education)

The undergraduate curriculum in mechanical engineering is built on the principle of project-centered education, or PROCEED. A number of courses throughout the curriculum are structured to motivate the study of engineering science by challenging students with in-depth analysis of real mechanical components and systems. In proceed, students address real-world projects based on current industrial methods and practices, and have opportunities to discuss the projects with engineering experts from both inside and outside the University. Undergraduate laboratories and computer facilities are integrated into the curriculum to connect theory with practice, and a Web-based portfolio system, Polaris, has been developed to provide a mechanism for students to showcase project-based work to prospective employers and graduate schools.

## Portable Computing Devices

Students entering Mechanical Engineering are expected to have a portable computing device (e.g., a laptop, netbook, or the equivalent) at their disposal. The use of such computing devices will be necessary in many required courses, and individual instructors may require that a laptop be brought to class or lab sessions. For a list of



minimum system requirements see: <http://www.me.utexas.edu/meter/laptopreq.php>.

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one course with a quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and one writing flag are carried by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Chemistry 301 (May be used to fulfill the science and technology, part II, requirement of the core curriculum.)	3
• Engineering Mechanics 306, 319	6
• Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
• Mechanical Engineering 302, 205, 311, 111L, 324, 326	15
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
• Rhetoric and Writing 306 (May also be counted toward the English composition requirement of the core curriculum.)	3
	<b>Total 47</b>
<b>Major Sequence Courses</b>	

• Mechanical Engineering 333T, 335, 336, 136L, 338, 339, 139L, 340, 140L, 343, 344, 144L, 353, 366J, 266K, 266P (Mechanical Engineering 333T carries a writing flag and an ethics and leadership flag; Mechanical Engineering 266K carries an independent inquiry flag.)	38
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### Other Required Courses

• Mechanical Engineering 218, 330, 130L	6
• Approved career gateway electives	6
• Approved mathematics elective	3
• Approved natural science/mathematics elective	3
	<b>Total 18</b>

### Remaining Core Curriculum Requirements

• English 316K (humanities)	3
• American and Texas government	6
• American history	6
• Social and behavioral sciences	3
• Visual and performing arts	3
• Undergraduate Studies 302 or 303 (some sections carry a writing flag)	3
	<b>Total 24</b>
	<b>Minimum Required 127</b>

## Bridges to the Future Certificate Program

The Department of Mechanical Engineering offers highly qualified senior-level undergraduate students an opportunity for in-depth study and research in an emerging area of mechanical engineering through the Bridges to the Future Certificate Program. Upon completion of a prescribed series of technical electives and an independent research study under the direction of a faculty member and a doctoral student mentor, students receive a certificate and a letter from the department chair that describes the program and the work completed. The certificate and its supporting documentation, plus supporting letters from supervising faculty and mentors, can be valuable assets for students applying to graduate school or pursuing competitive job opportunities. This certificate will not appear on the student's transcript.

Certificate programs are currently available in the areas of advanced materials engineering, nuclear and radiation engineering, sustainable energy systems, advanced design and manufacturing, biomechanical engineering, micro- and nanoscale engineering, and management science and engineering. The Department of Mechanical Engineering provides each certificate candidate with a small project grant, and in some cases, with scholarship support.

Students must apply for admission to a certificate program during the junior year; they must have completed all basic sequence courses and must have been admitted to the major sequence in mechanical engineering. Students admitted to the program must begin the required coursework early in the senior year; six hours of undergraduate coursework may be used to fulfill the career gateway elective requirement described below. In some cases, the coursework may include a graduate course, which may be credited toward a University graduate degree.

Details on course offerings and admission procedures are available from the Department of Mechanical Engineering undergraduate office

## Career Gateway Elective Options

The mechanical engineering curriculum includes six hours of career gateway electives, which are to be selected by the student to support his or her career goals. These courses must be chosen carefully and must be pertinent to each other and to the student's career goals.

Before registering for any potential career gateway elective courses, students must prepare a career statement and a list of relevant, related courses, and a mechanical engineering faculty mentor must provide preliminary approval. Ultimately, the faculty undergraduate adviser in mechanical engineering must provide final approval before the student's first degree audit for graduation.

By the beginning of the semester in which he or she will take the first potential career gateway elective, the student must have completed all basic sequence courses with a grade of at least C- in each and must have been admitted unconditionally to the major sequence in mechanical engineering.

Career gateway electives must include approved upper-division technical courses from mechanical engineering and other engineering departments, approved advanced courses in natural sciences, and preparatory courses for graduate study in the health professions. Highly qualified students are encouraged to fulfill career gateway elective requirements as part of the Bridges to the Future Certificate Program described above.

Career gateway elective options may include a total of three hours of special topics coursework (Mechanical Engineering 179M, 279M, 379M) without special approval, or projects coursework (Mechanical Engineering 177K, 277K, 377K) with special approval by the undergraduate adviser. Students who wish to count additional topics or projects for credit must petition for consent by the undergraduate adviser. Options may also include either Mechanical Engineering 325L or Mechanical Engineering 225M.

With special approval of the Engineering Honors Program director, a mechanical engineering student in the honors program may include Mechanical Engineering 679H in the career gateway elective option.

Some possible career gateway elective options and related courses are listed below.

### Biomechanical Engineering

Biomechanical engineering is one of the most exciting emerging areas of engineering, and mechanical engineers will play an important role in this field. Areas of special interest include biomaterials, biomechanics, fluid flow, heat transfer, mechanical design, nuclear science, and systems analysis. This option also can be tailored to provide a background for professional education in medicine or dentistry or for graduate study in biomedical engineering. Courses supporting a career in biomechanical engineering include

Mechanical Engineering 354, *Introduction to Biomechanical Engineering*

Mechanical Engineering 354M, *Biomechanics of Human Movement*

Mechanical Engineering 372J, *Robotics and Automation*

Mechanical Engineering 379N, *Engineering Acoustics*

Approved biomedical engineering and natural science electives

### Dynamics and Control

The engineering of "intelligent machines" is a rapidly growing field, demanding an understanding of mechanical and electronic components, of software, and of the ways these elements interact in complex systems. Courses supporting career paths in this area include

Mechanical Engineering 348C, *Introduction to Mechatronics I*

Mechanical Engineering 348D, *Introduction to Mechatronics II*

Mechanical Engineering 355K, *Engineering Vibrations*

Mechanical Engineering 360, *Vehicle System Dynamics and Controls*

Mechanical Engineering 364L, *Automatic Control System Design*

Mechanical Engineering 372J, *Robotics and Automation*

Mechanical Engineering 379N, *Engineering Acoustics*

Approved electrical and computer engineering and natural science electives

### Manufacturing and Design

Mechanical engineering is the focal point for design and manufacturing of components and systems ranging from automobiles to computer chips. The manufacturing and design option prepares students for leadership in this important field. Suggested courses include

Mechanical Engineering 350, *Machine Tool Operations for Engineers*

Mechanical Engineering 352K, *Engineering Computer Graphics*

Mechanical Engineering 364L, *Automatic Control System Design*

Mechanical Engineering 365K, *Finite Element Method*

Mechanical Engineering 368J, *Computer-Aided Design*

Mechanical Engineering 372J, *Robotics and Automation*

Mechanical Engineering 379M (Topic: Engineering Entrepreneurship)

Mechanical Engineering 379M (Topic: *Solid Free-Form Fabrication*)

Mechanical Engineering 379M (Topic: *Statistical Methods in Manufacturing*)

Mechanical Engineering 379M (Topic: Polymer Nanocomposites)

Approved engineering and natural science electives

### Materials Engineering

The design and manufacture of most engineering devices and systems is heavily constrained by materials properties and the availability of materials. This option allows students to obtain a concentration in materials engineering as a basis for practice and graduate study in this field. Relevant courses include

Mechanical Engineering 349, *Corrosion Engineering*

Mechanical Engineering 359, *Materials Selection*

Mechanical Engineering 378C, *Electroceramics*

Mechanical Engineering 378K, *Mechanical Behavior of Materials*

Mechanical Engineering 378P, *Properties and Applications of Polymers*

Mechanical Engineering 378S, *Structural Ceramics*

Approved materials-related engineering and natural science electives

### Nuclear and Radiation Engineering

Engineers with a background in nuclear and radiation engineering find opportunities providing electrical power in safe, efficient, and environmentally benign ways for commercial or defense purposes; extending nuclear reactor plant life; developing new ways of producing and using radioisotopes in medical physics for organ imaging or cancer therapy; developing new industrial applications for neutron or gamma-ray radiation use; developing long-term strategies for radioactive waste disposal; and developing systems to maintain the security of nuclear materials. They also work with nuclear-related national security issues and in nuclear chemical engineering. It is recommended that students interested in this area take one or more of the following courses

Mechanical Engineering 136N, Mechanical Engineering 236N,

*Concepts in Nuclear and Radiation Engineering*

Mechanical Engineering 337C, *Introduction to Nuclear Power Systems*

Mechanical Engineering 337F, *Nuclear Environmental Protection*  
 Mechanical Engineering 361E, *Nuclear Reactor Operations and Engineering*  
 Mechanical Engineering 361F, *Radiation and Radiation Protection Laboratory*

**Operations Research and Industrial Engineering**

Today's industrial planners and managers commonly use quantitative decision-making techniques. This option melds traditional industrial engineering and its modern outgrowth, operations research. Emphasis is on mathematical modeling, applied statistics, and the use of the computer to assist the decision maker. Students interested in this option should consider courses such as

Mechanical Engineering 366L, *Operations Research Models*  
 Mechanical Engineering 367S, *Simulation Modeling*  
 Mechanical Engineering 373K, *Basic Industrial Engineering*  
 Mechanical Engineering 375K, *Production Engineering Management*  
 Approved engineering, business, or mathematics electives

**Thermal/Fluid Systems Engineering**

A traditional field of mechanical engineering is the design and manufacture of systems for the production, transmission, storage, and use of energy. This option is designed to prepare students for careers and graduate study in energy conversion, thermal system design, thermodynamics, heat transfer, and fluid mechanics. Suggested courses include

Architectural Engineering 346P, *HVAC Design*  
 Architectural Engineering 370, *Design of Energy Efficient and Healthy Buildings*  
 Architectural Engineering 371, *Energy Simulation in Building Design*  
 Aerospace Engineering 362K, *Compressible Flow*  
 Mechanical Engineering 337C, *Introduction to Nuclear Power Systems*  
 Mechanical Engineering 360L, *Turbomachinery and Compressible Flow*  
 Mechanical Engineering 360N, *Intermediate Heat Transfer*  
 Mechanical Engineering 361E, *Nuclear Reactor Operations and Engineering*  
 Mechanical Engineering 369L, *Introduction to Computational Fluid Dynamics*  
 Mechanical Engineering 374C, *Combustion Engine Processes*  
 Mechanical Engineering 374D, *Automotive Engineering Laboratory*  
 Mechanical Engineering 374F, *Fire Science*  
 Mechanical Engineering 374R, *Design of Air Conditioning Systems*  
 Mechanical Engineering 374S, *Solar Energy Systems Design*  
 Mechanical Engineering 379M (Topic: *Renewable Energy and Systems and Sustainability*)  
 Mechanical Engineering 379M (Topic: *Energy Technology and Policy*)  
 Approved engineering and natural science electives

**Suggested Arrangement of Courses**

Courses Sem Hrs  
**First Year**

**Fall**  
 Chemistry 301, *Principles of Chemistry I* 3  
 Mathematics 408C, *Differential and Integral Calculus* 4  
 Mechanical Engineering 302, *Introduction to Engineering Design and Graphics* 3  
 Rhetoric and Writing 306, *Rhetoric and Writing* 3  
 Undergraduate Studies 302 or Undergraduate Studies 303, *First-Year Signature Course* 3

**Total 16**

**Spring**  
 Engineering Mechanics 306, *Statics* 3  
 Mathematics 408D, *Sequences, Series, and Multivariable Calculus* 4  
 Mechanical Engineering 205, *Introduction to Computers and Programming* 2  
 Physics 303K, *Engineering Physics I* 3  
 Physics 103M, *Laboratory for Physics 303K* 1  
 Social and behavioral sciences or visual and performing arts 3

**Total 16**

**Second Year**

**Fall**  
 English 316K, *Masterworks of Literature* 3  
 Engineering Mechanics 319, *Mechanics of Solids* 3  
 Mathematics 427K, *Advanced Calculus for Applications I* 4  
 Mechanical Engineering 326, *Thermodynamics* 3  
 Physics 303L, *Engineering Physics II* 3  
 Physics 103N, *Laboratory for Physics 303L* 1

**Total 17**

**Spring**  
 Mechanical Engineering 311, *Materials Engineering* 3  
 Mechanical Engineering 111L, *Materials Engineering Laboratory* 1  
 Mechanical Engineering 218, *Engineering Computational Methods* 2  
 Mechanical Engineering 324, *Dynamics* 3  
 Mechanical Engineering 330, *Fluid Mechanics* 3  
 Mechanical Engineering 130L, *Experimental Fluid Mechanics* 1  
 American and Texas government 3

**Total 16**

**Third Year**

**Fall**  
 Mechanical Engineering 335, *Engineering Statistics* 3  
 Mechanical Engineering 336, *Materials Processing* 3  
 Mechanical Engineering 136L, *Materials Processing Laboratory* 1  
 Mechanical Engineering 338, *Machine Elements* 3  
 Mechanical Engineering 339, *Heat Transfer* 3  
 Mechanical Engineering 139L, *Experimental Heat Transfer* 1  
 American and Texas government 3

**Total 17**

**Spring**

Mechanical Engineering 333T, <i>Engineering Communication</i>	3
Mechanical Engineering 340, <i>Mechatronics</i>	3
Mechanical Engineering 140L, <i>Mechatronics Laboratory</i>	1
Mechanical Engineering 343, <i>Thermal-Fluid Systems</i>	3
American history	3
Approved mathematics elective	3
<b>Total</b>	<b>16</b>

#### Fourth Year

##### Fall

Mechanical Engineering 344, <i>Dynamic Systems and Controls</i>	3
Mechanical Engineering 144L, <i>Dynamic Systems and Controls Laboratory</i>	1
Mechanical Engineering 353, <i>Engineering Finance</i>	3
Mechanical Engineering 366J, <i>Mechanical Engineering Design Methodology</i>	3
Approved career gateway elective	3
American history	3
<b>Total</b>	<b>16</b>

##### Spring

Mechanical Engineering 266K, <i>Mechanical Engineering Design Project</i>	2
Mechanical Engineering 266P, <i>Design Project Laboratory</i>	2
Approved career gateway elective	3
Approved mathematics/natural science elective	3
Social and behavioral sciences or visual and performing arts	3
<b>Total</b>	<b>13</b>

## Bachelor of Science in Petroleum Engineering

Producing oil, gas, and other fluid resources from the earth is the task of the petroleum engineer. This challenging field of engineering requires application of a wide range of knowledge—from the basic sciences of mathematics, physics, geology, and chemistry to the principles of engineering analysis, design, and management.

Petroleum engineers provide the technological expertise to bring oil and natural gas from deep within the earth to the surface for delivery to processing facilities. Petroleum engineers focus on the efficient and safe extraction of fluids from their natural geologic formations.

Once geologists have located potential oil- or gas-bearing formations, petroleum engineers design and monitor the drilling of exploratory and development wells used to locate and produce the fluids contained within these formations. Drilling operations can be extremely expensive and technologically challenging, especially in offshore and remote areas or when drilling horizontal wells. In addition to overseeing drilling, petroleum engineers evaluate the characteristics of oil and gas reservoirs, select and implement recovery methods, develop methods to lift fluids, and design surface collection and treatment facilities to prepare produced hydrocarbons for delivery to a refinery or pipeline. Petroleum engineers are asked to devise novel advanced technologies to recover more oil or gas than what is naturally released from the rock

pore system. Advanced computational methods are often used to aid in accurate acquisition and analysis of data, simulation of alternative recovery schemes, and other difficult design problems.

In addition to traditional petroleum engineering career choices, there are other emerging careers for petroleum engineering graduates in pollution cleanup, underground waste disposal (including the subsurface injection of carbon dioxide to reduce atmospheric greenhouse gases), and hydrology. These disciplines increasingly rely on the expertise of petroleum engineers. Additional energy-related applications for which petroleum engineers are uniquely educated include in situ uranium leaching, geothermal energy production, and coal gasification.

Worldwide proved oil and gas reserves are larger than ever before. Experts agree that oil and gas will continue to play an important role in the global energy supply. Because hydrocarbon reserves are found in such diverse areas as Asia, South America, and the Middle East, petroleum engineers will have opportunities for challenging assignments all over the world.

The challenges facing the petroleum industry require large investments in technologically complex projects. The task of making wise and cost-effective investments falls to a great extent upon petroleum engineers, providing them with a high degree of challenge and responsibility.

The objective of the petroleum engineering program is to graduate practical, qualified engineers who can successfully pursue careers in the oil and gas production and services industries or similar areas. Graduates of the program are expected to understand the fundamental principles of science and engineering behind the technology of petroleum engineering to keep their education current and to give them the capability of self-instruction after graduation. They should be prepared to serve society by using the ideals of ethical behavior, professionalism, and environmentally responsible stewardship of natural resources.

The technical curriculum contains the following elements:

- A combination of college-level mathematics and basic sciences (some with experimental work) that includes mathematics through differential equations, probability and statistics, physics, chemistry, and geology
- Engineering topics that develop a working knowledge of fluid mechanics, strength of materials, transport phenomena, material properties, phase behavior, and thermodynamics
- Petroleum engineering topics that develop competence in (1) design and analysis of well systems and procedures for drilling and completing wells; (2) characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods; (3) design and analysis of systems for producing, injecting, and handling fluids; (4) application of reservoir engineering principles and practices to optimize resource development and management; and (5) use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty
- A major capstone design experience that prepares students for engineering practice, based on the knowledge and skills acquired in earlier coursework and incorporating engineering standards and realistic constraints

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses.



In addition, each student must complete the University's Core Curriculum (p. 22). In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling engineering degree requirements, students must also complete coursework to satisfy the following flag requirements: one independent inquiry flag, one course with a quantitative reasoning flag, one ethics and leadership flag, one global cultures flag, one cultural diversity in the US flag, and two writing flags. The independent inquiry flag, the quantitative reasoning flag, the ethics and leadership flag, and both writing flags are carried by courses specifically required for the degree; these courses are identified below. Courses that may be used to fulfill flag requirements (p. 24) are identified in the *Course Schedule*, available at <http://registrar.utexas.edu/schedules>.

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill technical and nontechnical elective requirements must be approved by the Petroleum and Geosystems Engineering undergraduate adviser before the student enrolls in them.

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Chemistry 301, 302 (Chemistry 301 may be used to fulfill the science and technology, part II, requirement of the core curriculum.)	6
• Engineering Mechanics 306, 319	6
• Geological Sciences 303, 316P	7
• Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
• Petroleum and Geosystems Engineering 301, 310, 312, 322K, 333T (Petroleum and Geosystems Engineering 333T carries a writing flag and an ethics and leadership flag.)	15
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill the science and technology, part I, requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
• Rhetoric and Writing 306 (May also be counted toward the English composition requirement of the core curriculum.)	3
<b>Total 56</b>	
<b>Major Sequence Courses</b>	
• Petroleum and Geosystems Engineering 421K, 323K, 323L, 323M, 424, 326, 430, 334, 337, 362, 365, 368, 373L	42
• Approved technical area electives	6

	<b>Total 48</b>
<b>Remaining Core Curriculum Courses</b>	
• English 316K (humanities)	3
• American and Texas government	6
• American history	6
• Visual and performing arts	3
• Social and behavioral sciences	3
• Undergraduate Studies 302 or 303 (some sections carry a writing flag)	3
	<b>Total 24</b>
	<b>Minimum Required 128</b>

## Suggested Arrangement of Courses

Courses	Sem Hrs
<b>First Year</b>	
<b>Fall</b>	
Chemistry 301, <i>Principles of Chemistry I</i>	3
Geological Sciences 303, <i>Introduction to Geology</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
Undergraduate Studies 302 or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3
<b>Total 16</b>	
<b>Spring</b>	
Chemistry 302, <i>Principles of Chemistry II</i>	3
Mathematics 408D, <i>Sequences, Series, and Multivariable Calculus</i>	4
Physics 303K, <i>Engineering Physics I</i>	3
Physics 103M, <i>Laboratory for Physics 303K</i>	1
Petroleum and Geosystems Engineering 301, <i>Engineering, Energy, and the Environment</i>	3
Social and behavioral sciences or visual and performing arts	3
<b>Total 17</b>	
<b>Second Year</b>	
<b>Fall</b>	
Engineering Mechanics 306, <i>Statics</i>	3
Physics 303L, <i>Engineering Physics II</i>	3
Physics 103N, <i>Laboratory for Physics 303L</i>	1
Mathematics 427K, <i>Advanced Calculus for Applications I</i>	4
Petroleum and Geosystems Engineering 310, <i>Formulation and Solution of Geosystems Engineering Problems</i>	3
Petroleum and Geosystems Engineering 312, <i>Physical and Chemical Behavior of Fluids I</i>	3
<b>Total 17</b>	
<b>Spring</b>	
Engineering Mechanics 319, <i>Mechanics of Solids</i>	3
Petroleum and Geosystems Engineering 322K, <i>Transport Phenomena in Geosystems</i>	3

Petroleum and Geosystems Engineering 333T, <i>Engineering Communication</i>	3
Geological Sciences 316P, <i>Sedimentary Rocks</i>	3
Social and behavioral sciences or visual and performing arts	3

**Total 15**

### Third Year

#### Fall

Petroleum and Geosystems Engineering 323K, <i>Reservoir Engineering I: Primary Recovery</i>	3
Petroleum and Geosystems Engineering 424, <i>Petrophysics</i>	4
Petroleum and Geosystems Engineering 326, <i>Thermodynamics and Phase Behavior</i>	3
Petroleum and Geosystems Engineering 430, <i>Drilling and Well Completions</i>	4
American government	3

**Total 17**

#### Spring

Petroleum and Geosystems Engineering 421K, <i>Physical and Chemical Behavior of Fluids II</i>	4
Petroleum and Geosystems Engineering 323L, <i>Reservoir Engineering II: Secondary and Tertiary Recovery</i>	3
Petroleum and Geosystems Engineering 362, <i>Production Technology and Design</i>	3
Petroleum and Geosystems Engineering 368, <i>Fundamentals of Well Logging</i>	3
American history	3

**Total 16**

### Fourth Year

#### Fall

Petroleum and Geosystems Engineering 323M, <i>Reservoir Engineering III: Numerical Simulation</i>	3
Petroleum and Geosystems Engineering 334, <i>Reservoir Geomechanics</i>	3
Petroleum and Geosystems Engineering 337, <i>Introduction to Geostatistics</i>	3
Petroleum and Geosystems Engineering 365, <i>Resource Economics and Valuation</i>	3
American government	3

**Total 15**

#### Spring

English 316K, <i>Masterworks of Literature</i>	3
Petroleum and Geosystems Engineering 373L, <i>Geosystems Engineering Design and Analysis II</i>	3
American history	3
Approved technical area electives	6

**Total 15**

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* (<http://registrar.utexas.edu/schedules>) at [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/) to determine which courses and

topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information*. In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Engineering Studies

### Engineering Studies: E S

#### Lower-Division Courses

##### E S 119, 219, 319. Topics in Engineering.

Restricted to engineering students. For each semester hour of credit earned, one lecture hour a week for one semester. Some topics are offered on the pass/fail basis only. Engineering Studies 119, 219, 319 and General Engineering 119, 219, 319 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

#### Upper-Division Courses

##### E S 222. Topics in Professional Development.

Restricted to engineering students. Small-group seminar involving reading, discussion, and oral reports. Two lecture hours a week for one semester. Engineering Studies 222 and General Engineering 222 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the pass/fail basis only.

##### E S 160, 260, 360. Service Learning for Engineers.

Supervised participation in a service-learning project that helps meet a community need. May be repeated for credit when the projects vary. With approval of the student's major department, may be counted toward an engineering degree. Prerequisite: Consent of instructor.

##### E S 370H. Engineering Entrepreneurship.

Principles of engineering entrepreneurship, including legal aspects and the ethics of practice. Three lecture hours a week for one semester. Engineering Studies 370H and General Engineering 370H may not both be counted. Prerequisite: Admission to an appropriate major sequence in engineering and to the Engineering Honors Program.

##### E S 177, 277, 377. Topics in Engineering.

For each semester hour of credit earned, one lecture hour a week for one semester. Some topics are offered on the pass/fail basis only. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

##### E S 377E. Interdisciplinary Entrepreneurship: Elective.

Same as Electrical Engineering 377E. Restricted to engineering students. Projects must differ significantly from those developed for Electrical Engineering 364D and 364E. Focus on skill development and mentoring in start-up formation, technology development, market validation, marketing, sales, operations, human resources, program management, and finance. Includes discussion of intellectual property, social issues in design, as well as ethical and safety considerations. Emphasis on written and oral presentation of start-up activities.

The equivalent of three lecture hours a week for one semester.  
Prerequisite: Consent of instructor.

### **E S 279K. Undergraduate Research Experience.**

Restricted to undergraduate students in the Graduates Linking with Undergraduates in Engineering (GLUE) program. Directed study or research in a selected area of engineering. One lecture hour and three laboratory hours a week for one semester. Engineering Studies 279K and General Engineering 279K may not both be counted. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: A major in engineering and a University grade point average of at least 3.00.

### **E S 279L. Women in Engineering Leadership Seminar.**

Restricted to engineering students. Lectures, discussions, and exercises related to various leadership issues. Two lecture hours a week for one semester. Engineering Studies 279L and General Engineering 279L may not both be counted. Offered on the pass/fail basis only.

### **E S 079M. Undergraduate Research Experience.**

Restricted to undergraduate students in the Equal Opportunity in Engineering Program. One lecture hour a week for one semester. Prerequisite: A major in engineering and a University grade point average of at least 3.00.

## **General Engineering**

### **General Engineering: G E**

#### **Lower-Division Courses**

#### **G E 206D. Supplemental Instruction for Chemistry 301.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Chemistry 301. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Chemistry 301.

#### **G E 206E. Supplemental Instruction for Chemistry 302.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Chemistry 302. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Chemistry 302.

#### **G E 207C. Supplemental Instruction for Mathematics 408C.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 408C. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408C.

#### **G E 207D. Supplemental Instruction for Mathematics 408D.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 408D. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408D.

#### **G E 207E. Supplemental Instruction for Mathematics 340L.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 340L. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 340L.

#### **G E 207K. Supplemental Instruction for Mathematics 427K.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 427K. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 427K.

#### **G E 207L. Supplemental Instruction for Mathematics 427L.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Mathematics 427L. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 427L.

#### **G E 207R. Supplemental Instruction for Mathematics 408K.**

Restricted to engineering students. Four lecture hours a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408K.

#### **G E 207S. Supplemental Instruction for Mathematics 408L.**

Restricted to engineering students. Four lecture hours a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408L.

#### **G E 207T. Supplemental Instruction for Mathematics 408M.**

Restricted to engineering students. Four lecture hours a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Mathematics 408M.

#### **G E 208K. Supplemental Instruction for Physics 303K.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Physics 303K. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Physics 303K.

#### **G E 208L. Supplemental Instruction for Physics 303L.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Physics 303L. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Physics 303L.

#### **G E 209. Supplemental Instruction for Engineering Courses.**

Restricted to engineering students. Development of problem-solving skills in the material covered in selected engineering courses. Two two-hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

#### **G E 212. Supplemental Instruction for Electrical Engineering 312.**

Restricted to engineering students. Development of problem-solving skills in the material covered in Electrical Engineering 312. Two two-

hour laboratory sessions a week for one semester. May not be counted toward any engineering degree. Prerequisite: Concurrent enrollment in Electrical Engineering 312.

### **G E 119, 219, 319. Topics in Engineering.**

Restricted to engineering students. Topics to supplement lower-division engineering curriculum. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Some topics are offered on the pass/fail basis only. Engineering Studies 119, 219, 319 and General Engineering 119, 219, 319 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

## **Upper-Division Courses**

### **G E 222. Topics in Professional Development.**

Restricted to engineering students. Small-group seminar involving reading, discussion, and oral reports. Two lecture hours a week for one semester. Engineering Studies 222 and General Engineering 222 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the pass/fail basis only.

# **Department of Aerospace Engineering and Engineering Mechanics**

Students should note that all prerequisite courses for the following courses must be completed on the letter-grade basis with a grade of at least C-.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Aerospace Engineering: ASE**

### **Lower-Division Courses**

#### **ASE 201. Introduction to Computer Programming.**

Fundamentals of programming in MATLAB. Designed for students who have not taken a computer programming class and who intend to take Aerospace Engineering 311. Two lecture hours a week for one semester. May not be counted as an aerospace engineering course for the Bachelor of Science in Aerospace Engineering.

#### **ASE 102. Introduction to Aerospace Engineering.**

Introduction to engineering analysis and design; introduction to aerodynamics, propulsion, flight mechanics, structural analysis, and orbital mechanics. One lecture hour a week for one semester. Prerequisite: Mathematics 408C or 408K with a grade of at least C-, and credit for high school physics.

#### **ASE 311. Engineering Computation.**

Numerical methods and applications to aerospace engineering problems. May include linear algebra, curve fitting, statistics, integration, and differentiation. Students use MATLAB. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K

with a grade of at least C-. Previous programming experience is recommended.

#### **ASE 118. Student Leadership Seminar.**

Principles of human development, strategic learning, and teaching. Small-group seminar involving reading, discussion, and written reports. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Consent of the engineering undergraduate adviser.

## **Upper-Division Courses**

#### **ASE 320. Low-Speed Aerodynamics.**

Fundamental concepts, fluid statics; integral and differential analysis; detailed analysis of inviscid, incompressible flows; aerodynamics of airfoils and wings. Three lecture hours a week for one semester. Prerequisite: Mathematics 427L and Mechanical Engineering 320 with a grade of at least C- in each.

#### **ASE 120K. Low-Speed Aerodynamics Laboratory.**

Wind tunnel and water channel experiments at subsonic speeds; use of instrumentation and written reports. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 320; Aerospace Engineering 333T (or another approved engineering communication course) with a grade of at least C-; and Mathematics 427L with a grade of at least C-.

#### **ASE 321K. Structural Analysis.**

Analysis of aerospace structural systems, with emphasis on matrix methods. Three lecture hours a week for one semester, with discussion hours to be arranged. Prerequisite: Aerospace Engineering 311 and Engineering Mechanics 319 with a grade of at least C- in each.

#### **ASE 324L. Aerospace Materials Laboratory.**

Study of the deformation and fracture behavior of materials used in aerospace vehicles. Structure-property relations, methods of characterizing material behavior, use of properties in the design process. Case histories. Written reports. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-.

#### **ASE 325L. Cooperative Engineering.**

This course covers the work period of aerospace engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Aerospace Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. May be repeated for credit. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Aerospace Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Aerospace Engineering 325LY and appointment for a full-time cooperative work tour.

#### **ASE 225M. Cooperative Engineering.**

This course covers the work period of aerospace engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Aerospace Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the



dean, and appointment for a full-time cooperative work tour; for 225MB, Aerospace Engineering 225MA and appointment for a full-time cooperative work tour.

### **ASE 125N. Cooperative Engineering.**

This course covers the work period of aerospace engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Aerospace Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

### **ASE 128. Aerospace Engineering Projects Laboratory.**

Directed work on an organized student project in aerospace engineering or engineering mechanics. The equivalent of one lecture hour a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: At least fifteen semester hours of coursework, a University grade point average of at least 2.50, preparation of a laboratory participation log, and approval by both the faculty member directing the student project and the undergraduate adviser.

### **ASE 330M. Linear System Analysis.**

Fundamentals of signals and systems; convolution; Laplace transforms; response of linear, time-invariant systems to standard inputs; frequency response methods; time-domain analysis; introduction to control systems. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 311M and Mathematics 427K with a grade of at least C- in each.

### **ASE 333T. Engineering Communication.**

Open only to aerospace engineering majors. Technical communication skills for engineers: written and oral reports; individual and collaborative composition; online and traditional research; editing techniques; document design for electronic and hard copy. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306 or the equivalent with a grade of at least C-.

### **ASE 339. Advanced Strength of Materials.**

Same as Engineering Mechanics 339. Curved beams, shear deformation, beam columns, beams on elastic foundations; inelastic behavior of members; elementary plate bending. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-.

### **ASE 346. Viscous Fluid Flow.**

Navier-Stokes equations, laminar and turbulent boundary layers, transition, effects of pressure gradients and compressibility. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 320 with a grade of at least C-.

### **ASE 347. Introduction to Computational Fluid Dynamics.**

Development and implementation of finite-difference schemes for numerical solution of subsonic, transonic, and supersonic flows. Emphasis on convection and diffusion equations of fluid dynamics. Evaluation of accuracy, stability, and efficiency. Three lecture hours a week for one semester. Aerospace Engineering 347 and Mechanical Engineering 369L may not both be counted. Prerequisite: Aerospace Engineering 311 and 320 with a grade of at least C- in each.

### **ASE 355. Aeroelasticity.**

Studies static aeroelastic phenomena; wing torsional divergence, control reversal, effect of wing sweep, flexibility effects on

aircraft stability and control, and design implications; dynamic aeroelasticity; and galloping of transmission lines, flutter, and unsteady aerodynamics. Includes an introduction to experimental aeroelasticity. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 321K and 330M with a grade of at least C- in each.

### **ASE 357. Mechanics of Composite Materials.**

Anisotropic constitutive relationships, lamination theory, failure theories, micromechanical behavior of laminates; laminated composite plates--bending, vibration, and buckling; composite fabrication, sandwich and other composite lightweight structures. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 321K with a grade of at least C-.

### **ASE 361K. Aircraft Design I.**

Conceptual design of an aircraft to meet a mission specification. Includes estimation of weight, cost from payload, and range requirements; selection of configuration; preliminary sizing of wing, fuselage, and tail/canard; aerodynamic design of wing and tail; weight and balance; and performance estimation. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 367K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 364 and 376K.

### **ASE 361L. Aircraft Design II.**

Preliminary design of an aircraft from a conceptual design to satisfy a given set of requirements. Includes preliminary structural design; detailed estimates of weight, balance, and performance; and satisfaction of stability, control, and handling quality requirements. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 321K and 361K with a grade of at least C- in each, and credit with a grade of at least C- or registration for Aerospace Engineering 324L and 370L.

### **ASE 362K. Compressible Flow.**

Shock and expansion waves, quasi-one-dimensional flow, converging-diverging nozzles, diffusers, wind tunnel operation, linearized flow, and compressibility effects on aerodynamics of airfoils and bodies. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 320 with a grade of at least C-.

### **ASE 162M. High-Speed Aerodynamics Laboratory.**

Experiments using a variable-Mach number supersonic wind tunnel and ballistics range. Aerodynamics of blunt bodies and simple airfoils in supersonic flow. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 362K with a grade of at least C-.

### **ASE 363L. History of Space Flight.**

History and principles of space flight from early Chinese rocket experiments to Apollo 17 and the Space Shuttle; technological benefits from the space program and future space projects. Three lecture hours a week for one semester. May not be counted as an aerospace engineering course for the Bachelor of Science in Aerospace Engineering; may not be counted as a technical elective, a technical area course, or an engineering elective for any engineering degree. Prerequisite: Upper-division standing or consent of instructor.

### **ASE 364. Applied Aerodynamics.**

Detailed analysis of aerodynamics of compressible and incompressible flows about wings and airfoils; wing and airfoil parameters and force and moment coefficients; and thin-airfoil theory, lifting-line theory,

panel methods, high-lift devices, delta wings, transonic flows, and supersonic flows over wings. Three lecture hours a week for one semester. Aerospace Engineering 364 and 379L (Topic: Airfoil and Wing Design Theory) may not both be counted. Prerequisite: Aerospace Engineering 362K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 162M.

#### **ASE 365. Structural Dynamics.**

Analysis of discrete and continuous vibrating systems; deriving equations of motion; determining response; and natural frequencies and modes of vibration. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 330M with a grade of at least C-.

#### **ASE 366K. Spacecraft Dynamics.**

Basic satellite and spacecraft motion, orbital elements, coordinate systems and transformations; basic three-dimensional spacecraft attitude dynamics. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 311M and Mathematics 427K with a grade of at least C- in each.

#### **ASE 366L. Applied Orbital Mechanics.**

Selected topics in satellite motion and satellite applications, orbital coordinate systems, time, rendezvous and intercept, interplanetary trajectories, perturbing forces and perturbed trajectories. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.

#### **ASE 166M. Spacecraft Systems Laboratory.**

Overview of spacecraft subsystems, mission design program library, numerical techniques, mission planning references, mission constraints, and mission design projects. Includes written reports. One and one-half lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 374K.

#### **ASE 367K. Flight Dynamics.**

Equations of motion for rigid aircraft; aircraft performance, weight and balance, static stability and control, and dynamic stability; design implications. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 320 and 330M with a grade of at least C- in each.

#### **ASE 167M. Flight Dynamics Laboratory.**

Introduction to flight testing; instrumentation and methodology; performance testing. Computer modeling and dynamic simulation of aircraft motion; aircraft sizing. Written reports. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 367K.

#### **ASE 269K. Measurements and Instrumentation.**

Introduction to the instrumentation used in structural analysis, including linear variable displacement transducers (LVDTs), strain gauges, piezoelectric force sensors, accelerometers, and other sensors. Studies various methods of experimental design and data acquisition. Students explore the response of different aerospace structures through hands-on laboratory experiments. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Engineering Mechanics 319 and Mechanical Engineering 340 with a grade of at least C- in each.

#### **ASE 370L. Flight Control Systems.**

Fundamentals of linear control analysis and design for single-input, single-output systems; stability and performance measures; Routh Hurwitz analysis; root locus methods; frequency response (Bode and Nyquist); introduction to full-state feedback. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 367K.

#### **ASE 170P. Controls Laboratory.**

Three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 370L with a grade of at least C-.

#### **ASE 372K. Attitude Dynamics.**

Studies attitude representations, rotational kinematics, rigid-body dynamics, sensors and actuators, attitude determination, and passive and active attitude control systems. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.

#### **ASE 372L. Satellite Applications.**

Classical and modern orbit determination, remote sensors and their outputs, pattern recognition, image enhancement, satellite data analysis projects. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.

#### **ASE 372N. Satellite-Based Navigation.**

Satellite-based navigation systems, with focus on the Global Positioning System (GPS), ground and space segments, navigation receivers, satellite signal coordinate/time systems, denial of signal, differential techniques, GPS data analysis. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-.

#### **ASE 374K. Space Systems Engineering Design.**

Introduction to systems engineering: the systems engineering process, requirements, design fundamentals, trade studies, cost and risk analyses, integration, technical reviews, case studies, and ethics. Includes written reports. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 366K with a grade of at least C-, and credit with a grade of at least C- or registration for Aerospace Engineering 366L and 166M.

#### **ASE 374L. Spacecraft/Mission Design.**

Spacecraft systems characteristics, mission requirements, sensors, and consumables analyses; and mission phases, request for proposal, problem definition, ideation, proposal preparation, conceptual design review, preliminary design development and review, and design report preparation. Includes written reports. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Aerospace Engineering 166M and 374K with a grade of at least C- in each, and credit with a grade of at least C- or registration for Aerospace Engineering 376K.

#### **ASE 376K. Propulsion.**

Review of control volume analysis and quasi-one-dimensional compressible flow. Analysis and design of rocket nozzles and air-breathing engines, including performance and cycle analysis; the flow in nozzles, diffusers, compressors, and turbines; and combustion chamber processes and propellants. Includes an introduction to chemical and electric rocket propulsion. Three lecture hours a week for one semester. Prerequisite: Aerospace Engineering 362K with a grade of at least C-.

### **ASE 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a Bachelor of Science in Engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Aerospace Engineering 679HA and enrollment in the Engineering Honors Program.

### **ASE 179K, 279K, 379K. Research in Aerospace Engineering.**

Directed study or research in a selected area of aerospace engineering. One, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, selection of project, and consent of the faculty member directing project and the undergraduate adviser.

### **ASE 379L. Studies in Aerospace Engineering.**

Courses on current topics in aerospace engineering. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Selected Topics in Fluid Mechanics.** Three lecture hours a week for one semester.

**Topic 2: Selected Topics in Structural Mechanics.** Three lecture hours a week for one semester.

**Topic 3: Selected Topics in Flight Mechanics.** Three lecture hours a week for one semester.

**Topic 4: Selected Topics in Orbital Mechanics.** Three lecture hours a week for one semester.

**Topic 9: Selected Topics in Controls.** Three lecture hours a week for one semester.

### **ASE 179R. Research Seminar.**

Designed for students who plan to pursue a substantial research project or undergraduate honors thesis in aerospace engineering. Department faculty present information and lead discussions about their current research projects so that students can learn about available research opportunities. One lecture hour a week for one semester. May not be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Completion of at least twenty-four semester hours of coursework and a University grade point average of at least 3.50.

## **Engineering Mechanics: E M**

### **Lower-Division Courses**

#### **E M 306 (TCCN: ENGR 2301). Statics.**

Vector algebra, force systems, free-body diagrams; engineering applications of equilibrium, including frames, friction, distributed loads; centroids, moments of inertia. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 408D or 408L, and credit with a grade of at least C- or registration for Physics 303K.

#### **E M 311M (TCCN: ENGR 2302). Dynamics.**

Two- and three-dimensional kinematics and dynamics, applied to a broad class of engineering problems. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Engineering Mechanics 306, Mathematics 408D or 408M, and Physics 303K with a grade of at least C- in each.

#### **E M 319 (TCCN: ENGR 2332). Mechanics of Solids.**

Internal forces and deformations in solids; stress and strain in elastic and plastic solids; application to simple engineering problems. Three lecture hours a week for one semester, with discussion hours if necessary. Prerequisite: Engineering Mechanics 306, Mathematics 408D or 408M, and Physics 303K with a grade of at least C- in each.

### **Upper-Division Courses**

#### **E M 339. Advanced Strength of Materials.**

Same as Aerospace Engineering 339. Curved beams, shear deformation, beam columns, beams on elastic foundations; inelastic behavior of members; elementary plate bending. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-.

#### **E M 360. Studies in Engineering Mechanics.**

Advanced work in the various areas of engineering mechanics, based on recent developments. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing in engineering and consent of instructor.

**Topic 4: Theory of Material Science.**

**Topic 13: Applications of Finite Element Methods.**

## **Department of Biomedical Engineering**

### **Biomedical Engineering: BME**

#### **Lower-Division Courses**

#### **BME 301. World Health and Biotechnology.**

Overview of contemporary technological advances to improve human health. Introduction to major human health problems, the engineering method as applied to medical technologies, and legal and ethical issues involved with the development of new medical technologies. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Biomedical Engineering.

#### **BME 102. Introduction to Biomedical Engineering.**

Restricted to biomedical engineering majors. Examines the engineering method as applied to medical technologies used to improve human health. Two lecture hours a week for eight weeks.

#### **BME 102L. Introduction to Biomedical Engineering Design Principles.**

Restricted to biomedical engineering majors. Introduction to concepts of creative design, engineering analysis, reverse engineering, concept selection, and fabrication of biomedical engineering devices. One lecture hour and three laboratory hours a week for one semester.

### **BME 303. Introduction to Computing.**

Restricted to biomedical engineering majors. Introduction to computing and programming, focusing on arithmetic and logic operations, processor architecture, and programming structures. Programming skills for solving problems using machine and assembly language programming. Emphasis is on biomedical engineering applications of computing. Three lecture hours and two recitation hours a week for one semester.

### **BME 311. Network Analysis in Biomedical Engineering.**

Restricted to biomedical engineering majors. Basic concepts in circuit analysis and design of systems for biomedical engineering; Ohm's law, Kirchhoff's laws, and nodal and loop analysis; Thevenin's and Norton's theorem; operational amplifiers; high-order circuit and basic AC circuit analysis using Fourier and Laplace transforms. Three lecture hours and two laboratory/project hours a week for one semester. Prerequisite: Electrical Engineering 319K, Physics 303K, and credit or registration for Mathematics 427K.

### **BME 313. Numerical Methods and Modeling in Biomedical Engineering.**

Restricted to biomedical engineering majors. Principles and techniques of numerical analysis of biomedical engineering problems using high-level programming languages such as C++, Java, MATLAB, and LabVIEW. Numerical methods of integration, differentiation, interpolation, curve fitting, data analysis, sampling and estimation, error analysis, and analysis of ordinary differential equations. Numerical modeling of biomedical engineering systems, symbolic computation and scientific visualization, and integration of hardware and software. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 303 and Mathematics 408C.

### **BME 113L. Introduction to Numerical Methods in Biomedical Engineering.**

Restricted to biomedical engineering majors. Introduces principles and techniques of numerical analysis of biomedical engineering problems. Covers numerical methods of integration, differentiation, interpolation, curve fitting, data analysis, sampling and estimation, error analysis, analysis of ordinary differential equations, numerical modeling of biomedical engineering systems, symbolic computation, and scientific visualization. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 314, Electrical Engineering 319K, Mathematics 427K, and credit or registration for Biomedical Engineering 311 and 335.

### **BME 314. Engineering Foundations of Biomedical Engineering.**

Application of engineering and mathematics to analysis and constructive manipulation of biological systems and the development of biomedical therapies. Includes physiological mass and momentum transfer; biomechanics; structure, properties, and behavior of biological materials; electrophysiology and linear circuits; and biomedical imaging. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Biology 311C (or 211 and 212), Biomedical Engineering 102L, Chemistry 302, Physics 303K and 103M, and credit or registration for Electrical Engineering 312, Mathematics 427K, Physics 303L, and 103N.

## **Upper-Division Courses**

### **BME 221. Measurement and Instrumentation Laboratory.**

Restricted to biomedical engineering majors. Introduction to the basics of assembling and using instrumentation for the purposes of recording and displaying electrophysiological signals. Mechanical, chemical, and biological principles for biomedical instrumentation. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 311, 113L, 314, 333T, and 335, and credit or registration for Biomedical Engineering 343 and 365R.

### **BME 325L. Cooperative Engineering.**

Restricted to biomedical engineering majors. This course covers the work period of biomedical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Biomedical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Biomedical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Biomedical Engineering 325LY and appointment for a full-time cooperative work tour.

### **BME 225M. Cooperative Engineering.**

This course covers the work period of biomedical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Biomedical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Biomedical Engineering 225MA and appointment for a full-time cooperative work tour.

### **BME 125N. Cooperative Engineering.**

This course covers the work period of biomedical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Biomedical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

### **BME 333T. Engineering Communication.**

Restricted to biomedical engineering majors. Advanced communication skills for engineers, with emphasis on biomedical engineering topics. Strategies for written, visual, and interpersonal communication, and for oral presentation. Introduction to library research and to ethical decision making in biomedical engineering. Three lecture hours and one recitation hour a week for one semester. Prerequisite: Rhetoric and Writing 306 and credit or registration for Biomedical Engineering 314.

### **BME 335. Engineering Probability and Statistics.**

Restricted to biomedical engineering majors. Fundamentals of probability, random processes, and statistics with emphasis on biomedical engineering applications. Includes hypothesis testing, regression, and sample size calculations. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Electrical Engineering 319K and Mathematics 408D.



### **BME 339. Biochemical Engineering.**

Restricted to biomedical engineering majors. Principles of fermentation and cell culture technologies; introduction to recombinant DNA technology and protein expression; the development of therapeutics, vaccines, and diagnostics using genetic engineering. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 335, Biomedical Engineering 339, Chemical Engineering 339, 379 (Topic: Introduction to Biochemical Engineering). Prerequisite: Biology 311C (or 211 and 212); Chemistry 353 or 353M, and Chemistry 339K or 369.

### **BME 341. Tools for Computational Biomolecular Engineering.**

Covers technologies, such as DNA microarray, for high throughput acquisition of molecular biological data; databases generated by international consortia; mathematical analysis and modeling of data using signal processing, numerical computation, and information systems; and predictions made by analyses and their applications in biology and medicine. Four laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 113L, Electrical Engineering 360C, and Mathematics 427K; or consent of instructor.

### **BME 342. Computational Biomechanics.**

Introduction to computational modeling and simulation of musculoskeletal systems, with emphasis on lumped-parameter models of muscle, bone, tendon, and ligament. Three lecture hours a week for one semester. Prerequisite: Computer Science 323E, Mathematics 340L, and Physics 303K and 103M.

### **BME 343. Biomedical Engineering Signal and Systems Analysis.**

Restricted to biomedical engineering majors. Signals and systems representation; sampling and quantization; time and frequency domains; Laplace and z-transforms, transfer functions, and frequency response; two-port networks; Bode plots; convolution; stability; Fourier series; Fourier transform; AM/FM modulation; filter design; and applications in biomedical engineering. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 311, 314, and Mathematics 427K.

### **BME 344. Biomechanics.**

Restricted to biomedical engineering majors. Analysis and modeling of biomechanical systems at the macroscopic scale based on principles of statics, dynamics, and strength of materials. Three lecture hours a week for one semester. Biomedical Engineering 344 and 377T (Topic: Biomechanics) may not both be counted. Prerequisite: Biomedical Engineering 314, Mathematics 427K, and Physics 303K.

### **BME 345. Graphics and Visualization Laboratory.**

Restricted to biomedical engineering majors. Introduction to techniques for graphical display of biological data. Topics include transformations, geometric modeling, and two- and three-dimensional display algorithms. Includes computational projects with biomedical applications. Four laboratory hours a week for one semester. Prerequisite: Computer Science 323E, Electrical Engineering 422C (or 322C), and Mathematics 340L.

### **BME 346. Computational Biomolecular Engineering.**

Introduction to computational structural biology and molecular modeling, including the fundamentals of biomolecular structure and molecular thermodynamics. The principles and applications of biomolecular modeling used to explore the critical relationship between structure, function, and thermodynamic driving forces in molecular

biology. Two lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Biology 311C (or 211 and 212), Biomedical Engineering 113L, Chemistry 353 or 353M, and Computer Science 323E.

### **BME 347. Fundamentals of Biomedical Optics.**

Restricted to biomedical engineering majors. Fundamentals of the interaction of light with tissue for the purpose of imaging and treatment of disease. Focuses on quantitative modeling of tissue optical properties, light propagation in the tissue, heat transfer of laser irradiated tissue, and thermal damage models. Includes discussion of applications in laser surgery, pulse oximetry, and disease diagnosis using spectroscopy. Three lecture hours a week for one semester. Biomedical Engineering 347 and 377T (Topic: Fundamentals of Biomedical Engineering Optical Imaging). Prerequisite: Biomedical Engineering 251.

### **BME 348. Modeling of Biomedical Engineering Systems.**

Restricted to biomedical engineering majors. Lumped and distributed models of physiological system function from molecular through organismal levels. Linear system steady-state and transient behaviors. Interactions among multiple energy domains, including electrical, chemical, diffusional, mechanical, fluid, and thermal. Introduction to feedback control. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 311, 113L, and 314, and Mathematics 427K.

### **BME 251. Biomedical Image, Signal, and Transport Process Laboratory.**

Restricted to biomedical engineering majors. Processing and analysis of signals and images recorded from human studies or models. Lab projects are drawn from image digitization and reconstruction, mechanical studies conducted by students, and transport models. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 221 and Mathematics 427K.

### **BME 352. Engineering Biomaterials.**

Restricted to biomedical engineering majors. Overview of properties of metallic, ceramic, polymeric, and composite biomaterials used in biomedical applications. Material synthesis and processing. Analysis of mechanical and chemical properties, including stress-strain. Material interactions with the body and blood. Soft and hard biomaterials applications. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 314 and 221.

### **BME 353. Transport Phenomena in Living Systems.**

Restricted to biomedical engineering majors. Modeling and analysis of momentum, energy, and mass transport in living systems. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 113L, 314, Chemistry 353 or 353M, and Mathematics 427K.

### **BME 354. Molecular Sensors and Nanodevices for Biomedical Engineering Applications.**

Introduction to major types of molecular sensor systems, device miniaturization, and detection mechanisms, including molecular capture mechanisms; electrical, optical, and mechanical transducers; micro-array analysis of biomolecules; semiconductor and metal nanosensors; microfluidic systems; and microelectromechanical systems (MEMS, BioMEMS) fabrication and applications for biomedical engineering. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 314 and 352.

### **BME 357. Biomedical Imaging Modalities.**

Introduction to major biomedical imaging modalities, including X-ray radiography, computed tomography (CT), nuclear medicine (SPECT and PET), magnetic resonance imaging (MRI), and ultrasound. Emphasis on principles, approaches, and applications of each imaging modality. Basic physics and imaging equations of the imaging system; hardware and software; sources of noise and primary artifacts; safety and patient risk. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 348 and 251.

### **BME 365R. Quantitative Engineering Physiology I.**

Restricted to biomedical engineering majors. Vertebrate systems physiology: basic cellular physiology, electrophysiology of nerve and muscle, the motor system, the central nervous system, and the cardiovascular system. Focuses on a quantitative, model-oriented approach to physiological systems. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Biology 205L or 206L, Biomedical Engineering 311 and 314, Chemistry 339K or 369, Mathematics 427K, Physics 303L and 103N, and credit or registration for Biomedical Engineering 343.

### **BME 365S. Quantitative Engineering Physiology II.**

Restricted to biomedical engineering majors. Biological control systems: sensory, renal, respiratory, and immune systems. Focuses on a quantitative, model-oriented approach to physiological systems. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Biomedical Engineering 365R.

### **BME 370. Principles of Engineering Design.**

Restricted to biomedical engineering majors. Structured methodologies for designing systems or to interface with living systems. Creative design, analysis, selection, development, and fabrication of biomedical components and systems. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 348, 251, 353, and 365S.

### **BME 371. Biomedical Engineering Design Project.**

Restricted to biomedical engineering majors. Development of team projects in biomedical engineering with emphasis on prototype development and quantitative analysis, and written and oral reporting of the outcome. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 335 and 370.

### **BME 374K. Biomedical Instrument Design.**

Restricted to biomedical engineering, electrical engineering, or mechanical engineering majors. Application of electrical engineering principles in the design of electronic instrumentation at the circuit-board level for the measurement of pressure, temperature, flow, and impedance. Also includes the study of light intensity, bioelectric potentials, and stimulation devices such as pacemakers and defibrillators. Focus on design considerations specific to electro-medical environments, safety and efficacy, and public policy issues. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 311 and Electrical Engineering 438, or Electrical Engineering 313 and 438.

### **BME 374L. Applications of Biomedical Engineering Laboratory.**

Restricted to biomedical engineering, electrical engineering, or mechanical engineering majors. An in-depth examination of selected topics in biomedical engineering, including optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of

living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; and noninvasive cardiovascular measurements. Students have the opportunity to design analog and digital measurements and acquire and process meaningful biomedical signals. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Biomedical Engineering 374K or Electrical Engineering 374K.

### **BME 376. Cell Engineering.**

Introduction to principles that govern the structure, organization, and processes at cellular and subcellular levels. Special focus on engineering and quantitative aspects of cellular machinery. Employs engineering approaches to study receptors, macromolecular complexes, and cellular signaling; clinical and pharmaceutical approaches to perturb cellular structure and function for disease prevention and drug design. State-of-the-art experimental and computational techniques to study cellular engineering. Three lecture hours a week for one semester. Prerequisite: Biology 311C (or 211 and 212), Biomedical Engineering 314, and Mathematics 408C.

### **BME 177, 277, 377. Undergraduate Research Project.**

Restricted to biomedical engineering majors. Recommended for students considering graduate study. Topic is selected in conjunction with a faculty member in the Department of Biomedical Engineering or in another approved University department. A final written report or the equivalent is required. Three, six, or nine laboratory hours a week for one semester.

### **BME 377M. Medical Internship.**

Restricted to biomedical engineering majors. Designed for students considering medical school. Students participate in a variety of medical and clinical activities, including clinical inpatient rounds, outpatient visits, operating room procedures, and medical grand rounds. The equivalent of three lecture hours a week for one semester.

### **BME 377P. Integrated Clinical Research Internship.**

Restricted to biomedical engineering majors. Students perform integrated clinical research at the University of Texas M.D. Anderson Cancer Center and the University of Texas Health Science Center at Houston. Requires a substantial final report. The equivalent of three lecture hours a week for one semester.

### **BME 377Q. Integrated Clinical Medical Internship.**

Restricted to biomedical engineering majors. Students work with physicians at either the University of Texas M.D. Anderson Cancer Center or the University of Texas Health Science Center at Houston and participate in a variety of clinical routines. Requires a substantial final report. The equivalent of three lecture hours a week for one semester.

### **BME 377R. Research Internship.**

Restricted to biomedical engineering majors. Students perform biomedical research with a faculty member at an approved institution. Requires a substantial final report. The equivalent of three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 333T and 348.

### **BME 377S. Industrial Internship.**

Restricted to biomedical engineering majors. Students conduct research in biomedical companies in Texas and nationwide. Research may include development, management, business administration, and other topics. Requires a substantial final report. The equivalent of

three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 333T and 348.

#### **BME 177T, 277T, 377T. Topics in Biomedical Engineering.**

Restricted to biomedical engineering majors. One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

#### **BME 678. Undergraduate Thesis in Biomedical Engineering.**

Restricted to biomedical engineering majors. Research performed during two consecutive semesters under the supervision of a biomedical engineering faculty member or other approved faculty member; topics are selected jointly by the student and faculty member. The student provides a progress report at the end of the first semester and writes a thesis and gives an oral presentation at the end of the second semester. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a Bachelor of Science in Biomedical Engineering may use this course to fulfill the thesis requirements for the Bachelor of Arts, Plan II. Prerequisite: For 678A, admission to the major sequence in biomedical engineering and a University grade point average of at least 3.50; for 678B, a University grade point average of at least 3.50 and Biomedical Engineering 678A.

#### **BME 379. Tissue Engineering.**

Restricted to biomedical engineering majors. Introduction to biomedical research in tissue engineering. Includes case studies of tissues and organs of the body, physiology and biology of tissue, pathologies of tissue, current clinical treatments, the role of engineers in development of new technologies to diagnose and treat pathologies, quantitative cellular and molecular techniques, and applications of synthetic and natural biomaterials. Three lecture hours a week for one semester. Only one of the following may be counted: Biomedical Engineering 379, Chemical Engineering 339T, 379 (Topic: Cell and Tissue Engineering). Prerequisite: Biology 311C (or 211 and 212), and Biomedical Engineering 352 and 365S.

#### **BME 679H. Undergraduate Honors Thesis.**

Restricted to biomedical engineering majors. Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Biomedical Engineering 679HA and enrollment in the Engineering Honors Program.

## **Department of Chemical Engineering**

### **Chemical Engineering: CHE**

#### **Lower-Division Courses**

##### **CHE 102. Introduction to Chemical Engineering.**

Enrollment limited to freshmen. Introduction to chemical engineering, including problem solving and study skills. Opportunities and

responsibilities of a career in chemical engineering. One lecture hour and one recitation hour a week for one semester. May not be counted toward any engineering degree. Offered on the pass/fail basis only.

##### **CHE 210. Introduction to Computing.**

Computer programming focusing on basics of computing, high-level programming environments, and spreadsheets, with application to chemical engineering. Two lecture hours and one laboratory hour a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: A major in chemical engineering or consent of instructor.

##### **CHE 311. Engineering Sustainable Technologies.**

Flows of materials and energy in engineering environments at local, regional, and global scales, and the interaction of those anthropogenic flows with natural cycles of materials and energy. Discusses biogeochemical flows (grand cycles) and anthropogenic material flows at the national level, in industrial sectors, and for consumer products. Three lecture hours a week for one semester. Prerequisite: A high school course in chemistry and experience with Internet searches.

##### **CHE 317. Introduction to Chemical Engineering Analysis.**

Principles and applications of material and energy balances in process analysis. Three lecture hours and one to two recitation hours a week for one semester. Chemical engineering majors must make a grade of at least C- in this course in order to take upper-division courses in chemical engineering. Prerequisite: Chemical Engineering 210, Chemistry 302, and Mathematics 408D with a grade of at least C- in each.

### **Upper-Division Courses**

##### **CHE 322. Thermodynamics.**

Introductory course in thermodynamics with special reference to chemical process applications: basic laws, thermodynamic properties of single component systems, expansion and compression of fluids, heat engines, multicomponent systems, physical equilibrium, chemical equilibrium. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: Chemical Engineering 210, 317, Chemistry 353, and Mathematics 427K with a grade of at least C- in each.

##### **CHE 322M. Molecular Thermodynamics.**

Statistical and molecular concepts, especially the role of the microscopic chemical potential. Three lecture hours a week for one semester. Chemical Engineering 322M and 379 (Topic: Molecular Thermodynamics) may not both be counted. Prerequisite: Upper-division standing, Chemical Engineering 322 or the equivalent, and admission to an appropriate major sequence in engineering or consent of the department.

##### **CHE 323. Chemical Engineering for Micro- and Nanofabrication.**

Definition and description of the terminology and processes of microelectronics, including semiconductor facilities and chemical processes for integrated circuit manufacture, with an emphasis on unit processes; the major unit process, including thin-film metals and dielectrics deposition and etching, silicon oxidation and etching, ion implantation, diffusion, lithography, planarization, and process control; and an overview of promising nanopatterning and nanofabrication techniques, such as particle-beam imaging, nanoimprint, and near-field probe imaging, implantation, diffusion, lithography, planarization,

and process control. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemistry 318M or 310M, and 318N or 310N, and admission to an appropriate major sequence in engineering or consent of department.

### **CHE 325L. Cooperative Engineering.**

This course covers the work period of chemical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Chemical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. May be repeated for credit. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Chemical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Chemical Engineering 325LY and appointment for a full-time cooperative work tour.

### **CHE 225M. Cooperative Engineering.**

This course covers the work period of chemical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Chemical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Chemical Engineering 225MA and appointment for a full-time cooperative work tour.

### **CHE 125N. Cooperative Engineering.**

This course covers the work period of chemical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Chemical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

### **CHE 333T. Engineering Communication.**

Advanced technical communication skills, with emphasis on writing strategies for technical documents, oral presentations, and visual aids. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and admission to an appropriate major sequence in engineering.

### **CHE 339. Introduction to Biochemical Engineering.**

Microorganisms in chemical and biochemical syntheses; genetic manipulation of cells by classical and recombinant DNA techniques. Enzyme technology; design of bioreactors and microbial fermentations; separations of biological products. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 335, Biomedical Engineering 339, Chemical Engineering 339, 379 (Topic: Introduction to Biochemical Engineering). Prerequisite: Upper-division standing; Biology 311C and Chemistry 353; and admission to an appropriate major sequence in engineering or consent of the undergraduate faculty adviser.

### **CHE 339P. Introduction to Biological Physics.**

Diffusion, dissipation, and driving forces in cellular processes. Locomotion of bacteria, basic modeling of biomolecular folding and binding events, osmotic flows, and self-assembly in cells. Three lecture hours a week for one semester. Chemical Engineering 339P and 379 (Topic: Molecular Driving Force in Biology) may not both be counted.

Prerequisite: Chemical Engineering 322, 353, and 253K with a grade of at least C- in each, or consent of the department.

### **CHE 339T. Cell and Tissue Engineering.**

Introduction to biomedical research in tissue engineering. Includes case studies of tissues and organs of the body, physiology and biology of tissue, pathologies of tissue, current clinical treatments, the role of engineers in development of new technologies to diagnose and treat pathologies, quantitative cellular and molecular techniques, and applications of synthetic and natural biomaterials. Three lecture hours a week for one semester. Only one of the following may be counted: Biomedical Engineering 379, Chemical Engineering 339T, 379 (Topic: Cell and Tissue Engineering). Prerequisite: Biology 311C and Chemical Engineering 350.

### **CHE 341. Design for Environment.**

Overview of environmental assessment tools for chemical processes and products, including life cycle and risk assessments. Overview of design tools for improving environmental performance of chemical processes, including unit operations and flowsheet analysis methods. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 341, 384 (Topic: Design for Environment), 395K. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 342. Chemical Engineering Economics and Business Analysis.**

Study of the economic decisions faced by chemical engineers. Discounted cash flow techniques. Personal finance, managerial economics, and other special topics. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 342, 384 (Topic: Chemical Engineering Economics and Business Analysis), 395G. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 348. Numerical Methods in Chemical Engineering and Problem Solving.**

Numerical solutions to algebraic and differential equations; numerical methods to integration, interpolation, and regression analysis, with application to chemical engineering. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: Chemical Engineering 210, 317, and Mathematics 427K with a grade of at least C- in each.

### **CHE 350. Chemical Engineering Materials.**

Metallic, ceramic, polymeric, and composite materials. Crystal structures, phase diagrams, diffusion, and mechanical properties. Emphasis on structure-property-processing relationships. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; Chemistry 353 with a grade of at least C-; and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 353. Transport Phenomena.**

Basic study of momentum, energy and mass transport; includes viscous and turbulent flow; heat transfer and mass diffusion. Three lecture hours and one to two recitation hours a week for one semester. Chemical engineering majors must make a grade of at least C- in this



course. Prerequisite: Chemical Engineering 317 and Mathematics 427K with a grade of at least C- in each.

### **CHE 253K. Applied Statistics.**

Statistical methods such as data exploration and summary, least-squares fitting, probability and probability distributions, statistical inference and hypothesis testing, analysis of variance, design of experiments, statistical quality control, and use of professional statistical software. Two lecture hours a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: Chemical Engineering 210, 317, and Mathematics 427K with a grade of at least C- in each.

### **CHE 253M. Measurement, Control, and Data Analysis Laboratory.**

Laboratory safety; measurement and statistical analysis of transport process variables like temperature, pressure, and flow rate; computer data acquisition; feedback control; statistical process control and design of experiments; and production of professional-level lab reports. Five laboratory hours a week for one semester. Prerequisite: Chemical Engineering 333T, 348, 353, and 253K with a grade of at least C- in each.

### **CHE 354. Transport Processes.**

Design and analysis of heat exchangers, fluid-flow systems and equipment, and interphase-contact devices. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: Chemical Engineering 348 and 353 with a grade of at least C- in each.

### **CHE 355. Introduction to Polymers.**

Synthesis, structural characterization, physical properties, and applications of polymers. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemical Engineering 322, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 356. Optimization: Theory and Practice.**

Techniques of optimization, including formulation of optimization problems, one-dimensional search techniques, analytical methods, and n-dimensional search techniques; application of methods to process-industry problems. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Chemical Engineering 348 and 353, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 357. Technology and Its Impact on the Environment.**

Study of sources and fates of environmental pollutants; environmental quality standards--their measurement and regulation; and pollution control design procedures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 359. Energy Technology and Policy.**

Technology and policy related to energy supply and demand, oil and gas production, coal utilization, hydrogen production, fuel cells, transportation, nuclear power, solar and wind energy, biomass utilization, energy conservation, and climate change. Three lecture hours a week for one semester. Only one of the following may be counted: Chemical Engineering 359, 379 (Topic: Energy Technology and Policy), 384 (Topic: Energy Technology and Policy). Prerequisite:

Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 360. Process Control.**

Analysis of process dynamics and methods for the design of automatic control systems for chemical process plants. Three lecture hours and one to two recitation hours a week for one semester. Prerequisite: Chemical Engineering 322, 253M, and 354 with a grade of at least C- in each.

### **CHE 363. Separation Processes and Mass Transfer.**

Design and analysis of equilibrium and mass transfer based on separations such as absorption, chromatography, crystallization, distillation, extraction, and membrane-based processes. Three lecture hours and one to two recitation hours a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: Chemical Engineering 322, 348, and 353 with a grade of at least C- in each.

### **CHE 264. Chemical Engineering Process and Projects Laboratory.**

Experimental studies of unit operations. Laboratory safety. Statistical data analysis. Written and oral reports. Six laboratory hours a week for one semester. Prerequisite: Chemical Engineering 253M and 363 with a grade of at least C- in each. Students must register in the undergraduate advising office.

### **CHE 372. Chemical Reactor Analysis and Design.**

Planning and design of commercial chemical and biochemical reaction systems for producing fuels, polymers, specialty and consumer products, pharmaceuticals, solid-state devices, and other products. Three lecture hours and one recitation hour a week for one semester. Chemical engineering majors must make a grade of at least C- in this course. Prerequisite: Chemical Engineering 322, 348, and 354 with a grade of at least C- in each.

### **CHE 473K. Process Design and Operations.**

Process design, economics, and safety; design projects representing a variety of industries and products. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Chemical Engineering 354, 363, and 372 with a grade of at least C- in each.

### **CHE 376K. Process Evaluation and Quality Control.**

Use of statistical techniques to evaluate, compare, and optimize processes. Design of experiments for improved product quality control. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 177K, 277K, 377K. Undergraduate Research Project.**

Recommended for students considering graduate study. Topic to be selected in conjunction with individual chemical engineering faculty member, with approval by the department chair. A final written report is required. Three, six, or nine laboratory hours a week for one semester. Prerequisite: A grade point average of at least 3.00 in chemical engineering courses. Students must register in the undergraduate advising office.

### **CHE 179, 279, 379, 479. Topics in Chemical Engineering.**

Special topics of current interest. The equivalent of one, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and

admission to an appropriate major sequence in engineering or consent of the department.

### **CHE 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of a chemical engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the department chair. The student makes two oral presentations and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and the Bachelor of Science in Chemical Engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Chemical Engineering Honors Program; for 679HB, enrollment in the Chemical Engineering Honors Program and credit for Chemical Engineering 679HA.

## **Department of Civil, Architectural, and Environmental Engineering**

### **Architectural Engineering: ARE**

#### **Lower-Division Courses**

##### **ARE 102. Introduction to Architectural Engineering.**

Introduction to architectural engineering as a career by use of case studies. One lecture hour a week for one semester. Offered in the fall semester only. Prerequisite: A major in architectural engineering, civil engineering, or architecture, or consent of instructor.

##### **ARE 217. Computer-Aided Design and Graphics.**

Introduction to procedures in computer-aided design and computer graphics used in producing plans and three-dimensional electronic models associated with building design and construction. Three hours of lecture and laboratory a week for one semester.

#### **Upper-Division Courses**

##### **ARE 320K. Introduction to Design I.**

Introduction to design principles, concepts, and problem-solving approaches. Issues addressed by a series of two- and three-dimensional studies. Nine laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Credit or registration for Architectural Engineering 217.

##### **ARE 320L. Introduction to Design II.**

Continuation of Architectural Engineering 320K. Focus on building design. Nine laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Architectural Engineering 320K and credit or registration for Architectural Engineering 335.

##### **ARE 323K. Project Management and Economics.**

Solving economic problems related to construction and engineering; construction project management techniques; characteristics of construction organizations, equipment, and methods. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M.

##### **ARE 325L. Cooperative Engineering.**

This course covers the work period of architectural engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Architectural Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. May be repeated for credit. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Architectural Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Architectural Engineering 325LY and appointment for a full-time cooperative work tour.

##### **ARE 225M. Cooperative Engineering.**

This course covers the work period of architectural engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Architectural Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Architectural Engineering 225MA and appointment for a full-time cooperative work tour.

##### **ARE 125N. Cooperative Engineering.**

This course covers the work period of architectural engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Architectural Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

##### **ARE 335. Materials and Methods of Building Construction.**

Elements and properties of construction materials and components; fabrication and construction technologies, methods, and processes; engineering systems characteristic of commercial buildings such as foundation, structural, and building envelope systems. Three or four lecture and discussion hours a week for one semester. Prerequisite: Architectural Engineering 320K, Civil Engineering 314K, and admission to the major sequence in architectural engineering.

##### **ARE 345K. Masonry Engineering.**

Behavior and design of masonry with respect to architectural, economic, and structural criteria. Four and one-half hours a week for one semester, including lecture and laboratory. Prerequisite: Civil Engineering 329 and credit or registration for Civil Engineering 331.

##### **ARE 346N. Building Environmental Systems.**

Analysis and design of building air conditioning systems; heating and cooling load calculations, air side systems analysis, air distribution, building electrical requirements, electrical and lighting systems. Three lecture hours a week for one semester. Prerequisite: Physics 303L and 103N, and credit or registration for Mechanical Engineering 320 or 326.

##### **ARE 346P. HVAC Design.**

Design and analysis of heating, ventilation, and cooling systems for buildings. Focus on application of fundamental energy and mass transfer principles to HVAC components. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N or consent of instructor.

### **ARE 358. Cost Estimating in Building Construction.**

Building construction estimating from plans and specifications, unit prices, lump sum estimates, job sites, overhead, general overhead, and bidding procedures. Estimating methods throughout the design process. Two lecture hours and three supervised laboratory hours a week for one semester. Prerequisite: Architectural Engineering 335 and admission to the major sequence in architectural engineering. Experience reading construction blueprints is recommended.

### **ARE 362L. Structural Design in Wood.**

Engineering properties of wood; design of glued-laminated and lumber structural members, connections, and simple systems; introduction to shear walls and diaphragms. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 329.

### **ARE 465. Integrated Design Project.**

Design of low-rise buildings, including structural and environmental systems; preparation of contract documents. Six hours a week for one semester, including lecture and laboratory. Prerequisite: Architectural Engineering 217, 320L, 335, and 346N, and Civil Engineering 331 or 335, and 357.

### **ARE 366. Contracts, Liability, and Ethics.**

Legal aspects of engineering and construction contracts; contract formation, interpretation, rights and duties, and changes; legal liabilities and professional ethics of architects, engineers, and contractors. Two lecture hours and two laboratory hours a week for one semester. Prerequisite: Admission to the major sequence in civil engineering or architectural engineering.

### **ARE 370. Design of Energy Efficient and Healthy Buildings.**

Design and analysis of sustainable buildings, envelopes and facades, and energy and resource use in energy efficient and healthy buildings. Applies building science principles used to avoid moisture problems, minimize sick-building syndrome symptoms, and reduce energy use. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N.

### **ARE 371. Energy Simulation in Building Design.**

Fundamentals of building energy simulations, analytical models for heat transfer in buildings, general numerical methods for solving equations from the analytical models, use of energy simulation tools in building design analysis, and parametric analyses used to study various operational parameters that affect energy use in buildings. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N or consent of instructor.

### **ARE 372. Modeling of Air and Pollutant Flows in Buildings.**

Fundamentals of indoor airflow modeling; use of computational fluid dynamics (CFD) for air quality and thermal comfort analyses; application of CFD for analysis of air velocity, temperature, humidity, and contaminant distributions with different ventilation systems. Three lecture hours a week for one semester. Prerequisite: Architectural Engineering 346N, Civil Engineering 319F, or consent of instructor.

### **ARE 177K, 277K, 377K. Studies in Architectural Engineering.**

Various specified topics or conference course. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Additional hours are required for some topics; these topics are identified in the Course Schedule. Some topics are offered on the

pass/fail basis only. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **ARE 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Architectural Engineering 679HA and enrollment in the Engineering Honors Program.

## **Civil Engineering: C E**

### **Lower-Division Courses**

#### **C E 301. Civil Engineering Systems.**

Introduction to civil engineering as a career; engineering problem solving; use of computers for text, graphics, and data analysis; introduction to civil engineering measurements; breadth of disciplines within civil engineering; engineering ethics. Two lecture hours and three laboratory hours a week for one semester.

#### **C E 311K. Introduction to Computer Methods.**

Organization and programming of civil engineering problems for computer solutions. Five hours a week for one semester, including lecture and laboratory. Prerequisite: Credit or registration for Mathematics 408D or 308L.

#### **C E 311S. Probability and Statistics for Civil Engineers.**

Basic theory of probability and statistics with practical applications to civil engineering problems, including statistical inference and sampling. Additional subjects may include reliability and risk analyses, estimation and regression analyses, and experimental design. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Mathematics 408D or 408M.

#### **C E 314K. Properties and Behavior of Engineering Materials.**

Structure, properties, and behavior of engineering materials, including concrete and metals. Laboratory exercises illustrate mechanical behavior of typical materials and demonstrate selected principles of mechanics. Six hours of lecture, laboratory, and supervised work a week for one semester. Prerequisite: Chemistry 301 and Engineering Mechanics 319.

#### **C E 319F. Elementary Mechanics of Fluids.**

Fluid properties, hydrostatics, elements of fluid dynamics, energy and momentum, boundary layers, similitude, pipe flow, metering instruments, drag forces. Three lecture hours and two laboratory hours a week for one semester. Civil Engineering 319F and Mechanical Engineering 330 may not both be counted. Prerequisite: Engineering Mechanics 306.

### **Upper-Division Courses**

#### **C E 321. Transportation Systems.**

Planning, economics, location, construction, operation, maintenance, and design of transportation systems; concepts of various modes

of transportation. Three lecture hours a week for one semester.  
Prerequisite: Civil Engineering 311S.

### **C E 325L. Cooperative Engineering.**

This course covers the work period of civil engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Civil Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. May be repeated for credit. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Civil Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Civil Engineering 325LY and appointment for a full-time cooperative work tour.

### **C E 225M. Cooperative Engineering.**

This course covers the work period of civil engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Civil Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Civil Engineering 225MA and appointment for a full-time cooperative work tour.

### **C E 125N. Cooperative Engineering.**

This course covers the work period of civil engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Civil Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

### **C E 329. Structural Analysis.**

Classical methods of analysis for determinate and indeterminate structures under stationary and moving loads. Four hours of lecture and supervised work a week for one semester. Prerequisite: Engineering Mechanics 319 and Civil Engineering 311K.

### **C E 331. Reinforced Concrete Design.**

Design of reinforced concrete beams and columns. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 314K and 329.

### **C E 333T. Engineering Communication.**

Technical communication skills for engineers, especially researching and writing technical documents for many kinds of readers, representing information graphically, delivering oral presentations, working collaboratively, and managing computer-mediated communication. Two lecture hours and one and one-half laboratory hours a week for one semester. Civil Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306 and admission to an appropriate major sequence in architectural or civil engineering.

### **C E 335. Elements of Steel Design.**

Analysis and design of tension members, beams, columns, and bolted and welded connections. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 314K and 329.

### **C E 341. Introduction to Environmental Engineering.**

Quantitative evaluation of the environmental, economic, and technical problems involved in control of pollutants of the air, water, and land. Three lecture hours a week for one semester. Prerequisite: Chemistry 301 and 302, or consent of instructor.

### **C E 342. Water and Wastewater Treatment Engineering.**

Application of chemical, biological, and physical principles to the analysis and design of water and wastewater treatment processes. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 341 and credit or registration for Civil Engineering 319F, or consent of instructor.

### **C E 346. Solid Waste Engineering and Management.**

Characteristics of municipal and industrial solid wastes, generation rates, collection systems, recycling, processing, and disposal. Three lecture hours a week for one semester, with occasional field trips. Prerequisite: Civil Engineering 341 or consent of instructor.

### **C E 351. Concrete Materials.**

Portland cement, aggregates, supplementary cementing materials, properties of fresh and hardened concrete, concrete durability, mixture proportioning, concrete construction, special concretes. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Civil Engineering 314K.

### **C E 356. Elements of Hydraulic Engineering.**

Flow in closed conduits, hydraulic machinery; open-channel flow; flow measurement; design of storm sewers. Five hours a week for one semester, including lecture and laboratory. Prerequisite: Civil Engineering 319F.

### **C E 357. Geotechnical Engineering.**

Engineering properties of soils; permeability and shear strength of soils; settlement of embankments and foundations of structures; laboratory measurements. Six hours a week for one semester, including lecture and laboratory. Prerequisite: Engineering Mechanics 319 and Civil Engineering 319F.

### **C E 358. Introductory Ocean Engineering.**

Wave theory and its applications to coastal engineering and offshore structure technology. Includes fundamentals of inviscid and viscous flow of incompressible fluids, and applications of computational fluid dynamics (CFD) in design. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 319F or consent of instructor.

### **C E 360K. Foundation Engineering.**

Effect of geotechnical conditions on the behavior, proportioning, and choice of foundation type; design of shallow and deep foundations; study of foundation case histories. Five hours a week for one semester, including lecture and discussion. Prerequisite: Civil Engineering 357.

### **C E 362M. Advanced Reinforced Concrete Design.**

Design of reinforced concrete buildings, including floor systems and structural walls. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 331.



**C E 362N. Advanced Steel Design.**

Design of steel buildings, beam columns, composite beams, plate girders, and connections. Five hours of lecture and supervised work a week for one semester. Prerequisite: Civil Engineering 335.

**C E 363. Advanced Structural Analysis.**

Structural analysis for forces and deflections using stiffness and flexibility approaches; application of energy methods in structural analysis; stiffness methods for computer-based structural analysis. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 329.

**C E 364. Design of Wastewater and Water Treatment Facilities.**

Analysis, synthesis, and integrated design of collection systems, pumping stations, and treatment plants for municipal wastewater; design of water treatment plants. Six hours a week for one semester, including lecture and design laboratory. Prerequisite: Civil Engineering 356 and credit or registration for Civil Engineering 342, or consent of instructor.

**C E 365K. Hydraulic Engineering Design.**

Application of engineering hydraulics to stormwater management; storm sewer design; engineering hydrology; open-channel hydraulics; hydraulic structures; culverts and bridges; stormwater detention facilities. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 356.

**C E 366K. Design of Bituminous Mixtures.**

Fundamental properties of asphalt and aggregates; design and construction of asphalt mixtures; special mixtures; superpave design method. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

**C E 367. Highway Engineering.**

Geometric design of modern highways and streets, including intersections and interchanges; driver behavior; and safety. Three lecture hours and one hour of computer-aided-design laboratory a week for one semester. Prerequisite: Civil Engineering 321 or consent of instructor.

**C E 367P. Pavement Design and Performance.**

Basic principles of design of pavements for highways, airfields, and railroads; pavement construction, maintenance, and rehabilitation. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 321, 357, and 366K.

**C E 367T. Traffic Engineering.**

Driver and vehicle characteristics, traffic studies, traffic laws and ordinances, intersection capacity, signs, markings, signals, bus transit, parking, design of street systems, and operational controls. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 321 or consent of instructor.

**C E 369L. Air Pollution Engineering.**

Characterization of sources, emissions, transport, transformation, effects, and control of outdoor and indoor air pollutants. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 341 and Mechanical Engineering 320, or consent of instructor.

**C E 370K. Environmental Sampling and Analysis.**

Principles of environmental chemistry; measurement of contaminants in air, water, and land environments; applications to municipal, industrial, and ambient samples. Six hours a week for one semester, including lecture and laboratory. Prerequisite: Upper-division standing in engineering and Civil Engineering 341, or consent of instructor.

**C E 171P. Engineering Professionalism.**

Examines professional engineering licensure, ethics, leadership, public service, and public policy, with an emphasis on multidisciplinary perspectives, legal and business considerations, and the importance of lifelong learning. Includes participation in a public service project. Two lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Admission to the major sequence in civil engineering and credit or registration for one of the following: Civil Engineering 360K, 362M, 362N, 364, 365K, 367, 376.

**C E 374K. Hydrology.**

Phases of the hydrologic cycle, unit hydrograph, flow routing, hydrologic statistics, design storms and flows, design of storm sewers, detention ponds and water supply reservoirs. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 311S and 356.

**C E 374L. Groundwater Hydraulics.**

Darcy's law, steady flow in aquifers, aquifer and well testing, regional flow, numerical simulation of groundwater flow, unsaturated flow, and groundwater recharge. Three lecture hours a week for one semester. Prerequisite: Civil Engineering 356 or consent of instructor.

**C E 375. Earth Slopes and Retaining Structures.**

Earth fills, excavations, and dams; soil compaction, ground improvement, and slope stability; seepage and dewatering; study of earth-pressure theories; design of earth-retaining structures. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Civil Engineering 357.

**C E 177K, 277K, 377K. Studies in Civil Engineering.**

Various specified topics or conference course. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Additional hours may be required for some topics; these are identified in the Course Schedule. Some topics are offered on the pass/fail basis only. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**C E 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Civil Engineering 679HA and enrollment in the Engineering Honors Program.

# Department of Electrical and Computer Engineering

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Electrical Engineering: E E

### Lower-Division Courses

#### **E E 302 (TCCN: ENGR 2305). Introduction to Electrical Engineering.**

The scope and nature of professional activities of electrical engineers, including problem-solving techniques; analysis and design methods; engineering professional ethics; analysis of analog resistive circuits, including Thevenin/Norton equivalents, mesh analysis, and nodal analysis; and operational amplifiers (DC response). Three lecture hours and two laboratory hours a week for one semester. Electrical Engineering 302 and 302H may not both be counted. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 408C or 408K.

#### **E E 302H. Introduction to Electrical Engineering: Honors.**

Restricted to students in the Engineering Honors Program. The scope and nature of professional activities of electrical engineers, including problem-solving techniques; analysis and design methods; engineering professional ethics; analysis of analog resistive circuits, including Thevenin/Norton equivalents, mesh analysis, and nodal analysis; and operational amplifiers (DC response). Three lecture hours and two laboratory hours a week for one semester. Electrical Engineering 302 and 302H may not both be counted. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 408C or 408K.

#### **E E 306. Introduction to Computing.**

Motivated, bottom-up introduction to computing; bits and operations on bits; number formats; arithmetic and logic operations; digital logic; the Von Neumann model of processing, including memory, arithmetic logic unit, registers, and instruction decoding and execution; introduction to structured programming and debugging; machine and assembly language programming; the structure of an assembler; physical input/output through device registers; subroutine call/return; trap instruction; stacks and applications of stacks. Three lecture hours and one recitation hour a week for one semester. Prerequisite: Credit with a grade of at least a C- or registration for Mathematics 408C or 408K.

#### **E E 309K. Topics in Electrical Engineering.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

#### **E E 309S. Development of a Solar-Powered Vehicle.**

Analysis, design, and construction of a solar-powered car for national competitions involving other universities. Study of electrical, mechanical, and aerodynamic systems. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 309K (Topic: Development of a Solar Car for NASC) and 309S may not both be counted.

#### **E E 411. Circuit Theory.**

Capacitance and inductance; first- and second-order transient circuit response, including operational amplifier circuits; sinusoidal steady state analysis; Bode plots; complex power in single and balanced three-phase systems; transformers; two-port networks (Z-parameters and Y-parameters); and computer-aided analysis and design. Three lecture hours and two recitation hours a week for one semester. Prerequisite: Electrical Engineering 302 or 302H with a grade of at least C-; credit with a grade of at least C- or registration for Mathematics 427K; and credit with a grade of at least C- or registration for Physics 303L and 103N.

#### **E E 312. Software Design and Implementation I.**

Basic problem solving, design and implementation techniques for imperative programming; structured programming in the C/C++ language; programming idioms; introduction to software design principles, including modularity, coupling and cohesion; introduction to software engineering tools; elementary data structures; asymptotic analysis. Three lecture hours and one recitation hour a week for one semester. Prerequisite: The following coursework with a grade of at least C-: Biomedical Engineering 303 or Electrical Engineering 306, and Electrical Engineering 319K.

#### **E E 313. Linear Systems and Signals.**

Representation of signals and systems; system properties; sampling; Laplace and z-transforms; transfer functions and frequency response; convolution; stability; Fourier transform; feedback; and control applications. Computer analysis using MATLAB. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 411, 331, or Biomedical Engineering 311 with a grade of at least C-; Mathematics 427K with a grade of at least C-; and credit with a grade of at least C- or registration for Mathematics 340L.

#### **E E 316. Digital Logic Design.**

Boolean algebra; analysis and design of combinational and sequential logic circuits; state machine design and state tables and graphs; simulation of combinational and sequential circuits; applications to computer design; and introduction to hardware description languages (HDLs) and field-programmable gate arrays (FPGAs). Three lecture hours and one recitation hour a week for one semester. Prerequisite: Computer Science 429 or Electrical Engineering 306 with a grade of at least C-.

#### **E E 319K. Introduction to Embedded Systems.**

Embedded systems; machine language execution; assembly and C language programming; local variables and subroutines; input/output synchronization; analog to digital conversion and digital to analog conversion; debugging; and interrupts. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Biomedical Engineering 303 or Electrical Engineering 306 with a grade of at least C-.

### Upper-Division Courses

#### **E E 321K. Mixed Signal and Circuits Laboratory.**

Digital and analog parametric testing of mixed-signal circuits and systems, including frequency response, harmonic and intermodulation, and noise behavior; use of system-level test equipment, including network analyzers, spectrum analyzers, and probe stations; coherent v. noncoherent measurements; design for testability. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-; and credit with a grade of at least C- or registration for

Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

#### **E E 422C. Software Design and Implementation II.**

Methods for engineering software with a focus on abstraction; specification, design, implementation, and testing of object-oriented code using a modern development tool-set for complex systems; design and implementation of object-oriented programs in Java; abstract data types; inheritance; polymorphism; parameterized types and generic programming; the operation and application of commonly used data structures; exception handling and fault tolerance; introduction to algorithm analysis; teamwork models. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Computer Science 312 or Electrical Engineering 312 with a grade of at least C-.

#### **E E 325. Electromagnetic Engineering.**

Electrostatics and magnetostatics; properties of conductive, dielectric, and magnetic materials; solutions of Maxwell's equations; uniform plane wave applications; frequency- and time-domain analyses of transmission lines. Three lecture hours a week for one semester. Prerequisite: Physics 303L, 103N, and Mathematics 427K with a grade of at least C- in each, and credit with a grade of at least C- or registration for Mathematics 427L.

#### **E E 325K. Antennas and Wireless Propagation.**

Solutions of time-varying Maxwell's equations with applications to antennas and wireless propagation; antenna theory and design, array synthesis; electromagnetic wave propagation, scattering, and diffraction; numerical methods for solving Maxwell's equations. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 325 with a grade of at least C-.

#### **E E 325L. Cooperative Engineering.**

This course covers the work period of electrical and computer engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Electrical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. May be repeated for credit. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Electrical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Electrical Engineering 325LY and appointment for a full-time cooperative work tour.

#### **E E 225M. Cooperative Engineering.**

This course covers the work period of electrical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Electrical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Electrical Engineering 225MA and appointment for a full-time cooperative work tour.

#### **E E 125N. Cooperative Engineering.**

This course covers the work period of electrical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Electrical

Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

#### **E E 125S. Internship in Electrical and Computer Engineering.**

Practical work experience in industry or a research lab under the supervision of an engineer or scientist. Requires a substantial final report. At least ten hours of work a week, for a total of 150 hours a semester or summer session. May be repeated for credit, but only three hours may be counted toward an electrical engineering degree. Offered on the pass/fail basis only. Prerequisite: Consent of the undergraduate adviser.

#### **E E 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Electrical Engineering.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Electrical and Computer Engineering. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **E E 331. Electrical Circuits, Electronics, and Machinery.**

Not open to electrical engineering majors. Brief theory of direct and alternating current circuits; single-phase and three-phase power transmission; electronic devices and instrumentation; electromechanics. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M with a grade of at least C-, and Physics 303L and 103N with a grade of at least C- in each.

#### **E E 333T. Engineering Communication.**

Advanced engineering communication skills, with emphasis on technical documents, oral reports, and graphics; collaborative work involving online communication and research. Three lecture hours a week for one semester. Prerequisite: English 316K with a grade of at least C-.

#### **E E 334K. Quantum Theory of Electronic Materials.**

Introduction to quantum mechanics; atoms and molecules; electron statistics; quantum theory of solids; electronic phenomena in semiconductors; and device applications based on these phenomena. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Physics 303L, and 103N with a grade of at least C- in each.

#### **E E 438. Fundamentals of Electronic Circuits.**

Analysis and design of electronic circuits using semiconductor devices. Basic device physics and small-signal modeling for diodes, bipolar junction transistors, and metal-oxide-semiconductor transistors; operation region and biasing; basic switching circuits; single-stage and multi-stage amplifier design and analysis; input and output impedance characteristics of amplifiers; frequency response; AC and DC coupling techniques; differential amplifiers and output stages. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 411 with a grade of at least C-; credit with a grade of at least C- or registration for Biomedical Engineering 343 or Electrical Engineering 313; and credit with a grade of at least C- or registration for one of the following: Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering

333T, Mechanical Engineering 333T, Petroleum and Geosystems Engineering 333T.

### **E E 338K. Analog Electronics.**

Analysis and design of analog electronic circuits; transistor models; single-ended amplifiers; differential amplifiers; operational amplifiers; frequency response; feedback theory; stability analysis; circuit nonidealities; op-amp-based circuits; output stages; power amplifiers; passive and active analog filters; and relaxation oscillators. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-.

### **E E 338L. Analog Integrated Circuit Design.**

Analysis and design of analog integrated circuits; transistor models; simple and advanced current mirrors; single-ended amplifiers; differential amplifiers; operational amplifiers; frequency response; feedback theory; stability analysis; circuit nonidealities and noise; output stages; analog filters. CAD tools for circuit analysis and design. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-.

### **E E 339. Solid-State Electronic Devices.**

Semiconductor materials; atomic orbitals to energy band structure of semiconductors; charge carrier transport, electron-hole generation and recombination; p-n junctions and Schottky barriers; bipolar and field-effect transistors; and introduction to optoelectronic devices. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Physics 303L, and 103N with a grade of at least C- in each.

### **E E 440. Integrated Circuit Nanomanufacturing Techniques.**

Integrated circuit processing; crystal growth and wafer preparation; epitaxial growth; oxidation, diffusion, and ion implantation; thin-film deposition techniques; and lithography and etching. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 339 with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

### **E E 341. Electric Drives and Machines.**

Fundamentals of electric machines. Electromechanical energy conversion; magnetic circuits, transformers, and energy conversion devices; and an introduction to power electronics. Motor drive fundamentals and applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 313 or 331 with a grade of at least C-.

### **E E 445L. Embedded Systems Design Laboratory.**

Design of microcontroller-based embedded systems; interfacing from both a hardware and software perspective; and applications, including audio, data acquisition, and communication systems. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 312 and 319K with a grade of at least C- in each; Electrical Engineering 411 and 313, or Biomedical Engineering 311 and 343, with a grade of at least C- in each; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering

333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

### **E E 445M. Embedded and Real-Time Systems Laboratory.**

Embedded microcomputer systems; implementation of multitasking, synchronization, protection, and paging; operating systems for embedded microcomputers; design, optimization, evaluation, and simulation of digital and analog interfaces; real-time microcomputer software; and applications, including data acquisition and robotics. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 445L (or 345L) or 445S (or 345S) with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

### **E E 445S. Real-Time Digital Signal Processing Laboratory.**

Architectures of programmable digital signal processors; programming for real-time performance; design and implementation of digital filters, modulators, data scramblers, pulse shapers, and modems in real time; and interfaces to telecommunication systems. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 312 and 319K with a grade of at least C- in each; Biomedical Engineering 343 or Electrical Engineering 313 with a grade of at least C-; credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T; and credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.

### **E E 347. Modern Optics.**

Modern optical wave phenomena with applications to imaging, holography, fiber optics, lasers, and optical information processing. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 313 and 325 with a grade of at least C- in each, or Biomedical Engineering 343 with a grade of at least C-.

### **E E 348. Laser and Optical Engineering.**

Principles of operation and applications of lasers, optical modulators, and optical detectors. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 339 with a grade of at least C-.

### **E E 351K. Probability and Random Processes.**

Probability, random variables, statistics, and random processes, including counting, independence, conditioning, expectation, density functions, distributions, law of large numbers, central limit theorem, confidence intervals, hypothesis testing, statistical estimation, stationary processes, Markov chains, and ergodicity. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 313 with a grade of at least C-.

### **E E 351M. Digital Signal Processing.**

Sampling, aliasing, truncation effects; discrete and fast Fourier transform methods; convolution and deconvolution; finite and infinite impulse response filter design methods; Wiener, Kalman, noncausal, linear phase, median, and prediction filters; and spectral estimation. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 343 or Electrical Engineering 313 with a grade of at least a C-, and credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.



### **E E 155. Electrical and Computer Engineering Seminar.**

Presentations by speakers from industry, government, academia, and professional private practice. Topics include environmental and other ethical concerns, safety awareness, quality management, technical career descriptions, and professionalism. Substantial practice in engineering communication. One lecture hour a week for one semester. Electrical Engineering 155 and 364D may not both be counted. Prerequisite: English 316K with a grade of at least C-.

### **E E 155L. Engineering Leadership Seminar.**

Presentations by speakers from industry, government, academia, and professional private practice. Topics include environmental and other ethical concerns, safety awareness, quality management, technical career descriptions, and professionalism. One lecture hour a week for one semester. Prerequisite: English 316K with a grade of at least C-, and consent of the dean.

### **E E 155R. Undergraduate Research Seminar.**

Restricted to students in electrical and computer engineering. Seminar on topics of research in electrical and computer engineering. One lecture hour a week for a semester. Offered on the pass/fail basis only.

### **E E 160, 260, 360, 460. Special Problems in Electrical and Computer Engineering.**

Elective course open to upper-division students in electrical engineering for original investigation of special problems approved by the department. For each semester hour of credit earned, the equivalent of three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.

### **E E 360C. Algorithms.**

Advanced problem solving methods; algorithm design principles; complexity analysis; study of the nature, impact, and handling of intractability; study of common algorithmic classes and their applications. Three lecture hours a week for one semester. Prerequisite: Computer Science 312 or Electrical Engineering 312 with a grade of at least C-; and Computer Science 313K or Mathematics 325K with a grade of at least C-.

### **E E 360F. Introduction to Software Engineering.**

Introduction to the discipline of software engineering. Includes software system creation and evolution; fundamental concepts and principles of software product and software process systems, including requirements, architecture and design, construction, deployment, and maintenance; and documentation and document management, measurement and evaluation, software evolution, teamwork, and project management. Three lecture hours a week for one semester. Prerequisite: One of the following with a grade of at least C-: Computer Science 314 or 314H, or Electrical Engineering 422C (or 332C).

### **E E 360K. Introduction to Digital Communications.**

Communication channels and their impairments; modulation; demodulation; probability-of-error analysis; source coding; error control coding; link budget analysis; equalization; synchronization and multiple access; spread spectrum; applications in wireline and wireless communication systems. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 335 or Electrical Engineering 351K with a grade of at least C-, and Biomedical Engineering 343 or Electrical Engineering 313 with a grade of at least C-.

### **E E 460M. Digital Systems Design Using HDL.**

Organization, design, simulation, synthesis, and testing of digital systems; hardware description languages (HDLs); field programmable gate arrays (FPGAs); hardware implementation of arithmetic and other algorithmic processes; state machine charts; microprogramming; and microprocessor design. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 316 and 319K with a grade of at least C- in each.

### **E E 460N. Computer Architecture.**

Characteristics of instruction set architecture and microarchitecture; physical and virtual memory; caches and cache design; interrupts and exceptions; integer and floating-point arithmetic; I/O processing; buses; pipelining, out-of-order execution, branch prediction, and other performance enhancements; design trade-offs; case studies of commercial microprocessors. Laboratory work includes completing the behavioral-level design of a microarchitecture. Three lecture hours and one and one-half laboratory/recitation hours a week for one semester. Prerequisite: Electrical Engineering 316 and 319K with a grade of at least C- in each.

### **E E 360P. Concurrent and Distributed Systems.**

Multithreaded programming, semaphores, monitors, lock-free synchronization, resource allocation; client/server distributed systems programming, logical clocks, global snapshots and property evaluation, leader election, consensus, protection, and transactions. Three lecture hours a week for one semester. Prerequisite: One of the following with a grade of at least C-: Computer Science 314 or 314H, or Electrical Engineering 422C (or 322C).

### **E E 460R. Introduction to VLSI Design.**

Theory and practice of very-large-scale integration (VLSI) circuit design. Metal-oxide-semiconductor (MOS) transistors; static and dynamic complementary metal-oxide-semiconductor (CMOS) combinational and sequential circuits; design of adders, multipliers, and shifters; performance, power consumption and testing. CAD tools for layout, timing analysis, synthesis, physical design, and verification. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 316, 438, and 339 with a grade of at least C- in each.

### **E E 360S. Digital Integrated Circuit Design.**

Circuit-level aspects of metal oxide silicon (MOS) and bipolar integrated circuit technologies. Logic gates and latches; propagation delays; circuit simulation models. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 and 339 with a grade of at least C- in each.

### **E E 360T. Software Testing.**

Basic concepts and techniques used in testing software and finding bugs. Includes process, unit, integration, and system testing; manual and automatic techniques for generation of test inputs and validation of test outputs; and coverage criteria. Focus on functional testing. Three lecture hours a week for one semester. Electrical Engineering 360T and 379K (Topic: Software Testing) may not both be counted. Prerequisite: One of the following with a grade of at least C-: Computer Science 314 or 314H, or Electrical Engineering 422C (or 322C).

### **E E 361D. System Design Metrics.**

Survey of engineering design, manufacturing, and lifetime support issues; implications of customer perceptions of quality on design; economics of design; legal implications of design decisions.

The equivalent of three lecture hours a week for one semester. Prerequisite: Electrical Engineering 364D with a grade of at least C-.

#### **E E 461L. Software Engineering and Design Laboratory.**

The design and development of large-scale software systems using automated analysis tools. Generation of concrete software engineering artifacts at all stages of the software life-cycle. Design principles and methods; design and modeling tools; collaborative development environment; object-oriented design and analysis; design patterns and refactoring; integration and testing tools; debugger and bug finder; program comprehension; software life-cycle and evolution. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Computer Science 314 or 314H or Electrical Engineering 422C (or 322C) with a grade of at least C-; credit with a grade of at least C- or registration for Computer Science 357 or 357H or Electrical Engineering 360C; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

#### **E E 361M. Introduction to Data Mining.**

Goals, methods, and applications of data mining. Includes data preprocessing, sampling, and visualization; algorithms for machine learning; clustering, classification, and predicting and forecasting; mining the Internet for content, link structure, and usage information; search engine design and social network analysis; and statistical methods. Three lecture hours a week for one semester. Electrical Engineering 361M and 379K (Topic: Introduction to Data Mining) may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each: Computer Science 314 or 314H or Electrical Engineering 422C (or 322C); Electrical Engineering 351K or Mathematics 362K; and Mathematics 340L.

#### **E E 361Q. Requirements Engineering.**

Methods and technology for acquiring, representing, documenting, verifying, validating, and maintaining requirements; text-based, graphic-based, and computational requirements model representations; requirements analysis to synthesize and resolve conflicts among disparate stakeholder viewpoints; requirements traceability and evolution, and change management. The equivalent of three lecture hours a week for one semester. Electrical Engineering 361Q and 379K (Topic: Requirements Engineering) may not both be counted. Prerequisite: Computer Science 312, 312H, or Electrical Engineering 312 with a grade of at least C-.

#### **E E 361R. Radio-Frequency Electronics.**

Modeling of active and passive devices and transmission line structures at high frequencies. Analysis and design of radio-frequency electronic circuits including amplifiers, mixers, multipliers, detectors, and oscillators; transistor-, circuit-, and system-level design methods, challenges, and topologies; noise and distortion analysis; and evaluation of modern radio systems. The equivalent of three lecture hours a week for one semester. Electrical Engineering 361R and 379K (Topic: Radio Frequency Circuit Design) may not both be counted. Prerequisite: Electrical Engineering 325 and 438 with a grade of at least C- in each.

#### **E E 362K. Introduction to Automatic Control.**

Analysis of linear automatic control systems in time and frequency domains; stability analysis; state variable analysis of continuous-time and discrete-time systems; root locus; Nyquist diagrams; Bode plots; sensitivity; lead and lag compensation. Three lecture hours a week

for one semester. Prerequisite: Upper-division standing, and Electrical Engineering 313 and Mathematics 340L with a grade of at least C- in each.

#### **E E 462L. Power Electronics Laboratory.**

Analysis, design, and operation of power electronic circuits; power conversion from AC to DC, DC to DC, and DC to AC; rectifiers, inverters, and pulse width modulated motor drives. Laboratory work focuses on the use of energy from renewable sources such as photovoltaics and wind. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

#### **E E 362Q. Power Quality and Harmonics.**

Introduction to and analysis of power quality and harmonic phenomena in electric power systems. Includes characteristics and definitions, voltage sags, electrical transients, harmonics, mitigation techniques, and standards of power quality and harmonics. The equivalent of three lecture hours a week for one semester. Electrical Engineering 362Q and 379K (Topic: Power Quality and Harmonics) may not both be counted. Prerequisite: Electrical Engineering 331 or 411 with a grade of at least C-.

#### **E E 362R. Renewable Energy and Power Systems.**

Introduction to renewable energy sources and their integration into power systems. Includes wind energy: resources, turbines, blades, rotor power characteristics, generators, active and reactive power, variability, and voltage regulation; solar energy: resources, solar radiation measurements, photovoltaic materials and properties, photovoltaic electrical characteristics, and system integration; and demonstrations with commercial-grade solar panels and laboratory-scale wind turbines. Three lecture hours a week for one semester. Electrical Engineering 362R and 379K (Topic: Renewable Energy and Power Systems) may not both be counted. Prerequisite: Electrical Engineering 411 or 331 with a grade of at least C-.

#### **E E 362S. Development of a Solar-Powered Vehicle.**

Analysis, design, and construction of a solar-powered car for national competitions involving other universities. Study of electrical, mechanical, and aerodynamic systems. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 362S and 379K (Topic: Development of a Solar Car for NASC) may not both be counted. Prerequisite: Upper-division standing.

#### **E E 363M. Microwave and Radio Frequency Engineering.**

Design principles in microwave and radio frequency systems; transmission lines and waveguides; S-parameter representation; impedance matching; microwave network analysis; microwave devices and components; electromagnetic effects in high-speed/high-frequency applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 325 with a grade of at least C-.

#### **E E 363N. Engineering Acoustics.**

Same as Mechanical Engineering 379N. Principles of acoustics, with applications drawn from audio engineering, biomedical ultrasound, industrial acoustics, noise control, room acoustics, and underwater sound. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.

### **E E 464C. Corporate Senior Design Project.**

Design and experimental projects, done in the laboratories of local companies, for electrical engineering students working full-time in industry; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.

### **E E 364D. Introduction to Engineering Design.**

Introduction to the engineering design process; assessing engineering problems and customer needs; acquiring, documenting, and verifying requirements; high-level system design principles; effects of economic, environmental, ethical, safety, and social issues in design; writing design specifications. Two lecture hours and three laboratory hours a week for one semester. Additional laboratory hours may be required for some sections; these are identified in the Course Schedule. Electrical Engineering 155 and 364D may not both be counted. Prerequisite: Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T, with a grade of at least C-; and credit with a grade of at least C- or registration for Electrical Engineering 438, 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L).

### **E E 364E. Interdisciplinary Entrepreneurship.**

First course in a two-semester sequence that concludes with Electrical Engineering 464S. Teams of students starting companies focus on skill development and mentoring in start-up formation, technology development, market validation, marketing, sales, operations, human resources, program management, and finance. Includes discussion of the role of intellectual property, the social issues in design, as well as ethical and safety considerations. Emphasis on written and oral presentation of start-up activities. The equivalent of three lecture hours a week for one semester, with additional hours to be arranged. Only one of the following may be counted: Computer Science 378 (Topic: Interdisciplinary Entrepreneurship), Electrical Engineering 364E, Engineering Studies 377 (Topic: Interdisciplinary Entrepreneurship), Management 337 (Topic: Interdisciplinary Entrepreneurship). Electrical Engineering 364E and 464S may not be counted by students with credit for Electrical Engineering 364D, 464H, 464K, or 464R. Prerequisite: Credit with a grade of at least C- in Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T; credit with a grade of at least C- or registration for Electrical Engineering 440, 445L (or 345L), 445S (or 345S), and 461L or 462L (or 362L); and consent of instructor.

### **E E 464G. Multidisciplinary Senior Design Project.**

Design and experimental projects done with teams of students from multiple engineering disciplines; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-; and Electrical Engineering 440, 445L (or 345L), 445S (or 345S), 461L, or 462L (or 362L) with a grade of at least C-.

### **E E 464H. Honors Senior Design Project.**

Restricted to students in the Engineering Honors Program. Design and experimental projects done under the direction of a University

faculty member; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-, and one of the following with a grade of at least C-: Electrical Engineering 438, 440, 445L (or 345L), 445S (or 345S), 461L, 462L (or 362L).

### **E E 464K. Senior Design Project.**

Design and experimental projects done in Department of Electrical and Computer Engineering laboratories; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Electrical Engineering 364D with a grade of at least C-, and one of the following with a grade of at least C-: Electrical Engineering 438, 440, 445L (or 345L), 445S (or 345S), 461L, 462L (or 362L).

### **E E 464R. Research Senior Design Project.**

Design and experimental projects done under the supervision of a University faculty member; the ethics of design for safety and reliability; emphasis on written and oral reporting of engineering projects. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Electrical Engineering 364D with a grade of at least C-, and one of the following with a grade of at least C-: Electrical Engineering 438, 440, 445L (or 345L), 445S (or 345S), 461L, 462L (or 362L).

### **E E 464S. Start-Up Senior Design Project.**

Continuation of Electrical Engineering 364E. Completion of a practical engineering product design; validation of the design through prototype construction and testing, modeling and simulation, and manufacturability analysis. Development of a completed company prospectus, seeking venture funding for the project, and participating in an innovative technology forum to present the proposed start-up company to potential investors. Three lecture hours and six laboratory hours a week for one semester. Electrical Engineering 364E and 464S may not be counted by students with credit for 364D, 464H, 464K, or 464R. Prerequisite: Electrical Engineering 364E with a grade of at least C-; one of the following courses with a grade of at least C-: Electrical Engineering 438, 449, 445L (or 345L), 445S (or 345S), 461L, 462L (or 362L); and consent of instructor.

### **E E 366. Engineering Economics I.**

Business organization; discounted cash flow calculations, including present-worth and rate-of-return calculations; replacement analyses; financial analyses; accounting and depreciation; income taxes; inflation; risk analysis, utility theory, decision models, sequential decision making; value of information. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 351K.

### **E E 366K. Engineering Economics II.**

Fundamentals of risk management, including portfolio theory, capital asset pricing theory, and optimal project mix; hedging financial risk; advanced economic analysis of alternative energy systems; and advanced mathematical modeling techniques for economic analysis. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 366 with a grade of at least C-.

### **E E 366L. Statistics for Manufacturing.**

Statistical analysis applied to the development and control of manufacturing operations; quality control, statistical process control,

and design of experiments. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 351K with a grade of at least C-.

#### **E E 368L. Power Systems Apparatus and Laboratory.**

Fundamentals of power systems emphasized through laboratory experiments; complex power, three-phase circuits, per-unit system, transformers, synchronous machines, transmission line models, steady-state analysis, induction machines, capacitor banks, protective relaying, surge arrestors, and instrumentation. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 368L and 379K (Topic: Power Systems Apparatus and Laboratory) may not both be counted. Prerequisite: Electrical Engineering 411 or 331 with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

#### **E E 369. Power Systems Engineering.**

Three-phase power systems, system component models, symmetrical components, and admittance and impedance matrices. Formulation and analysis of loadflow, short circuit, and stability for electric grids. Economic operation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Electrical Engineering 313 or 331 with a grade of at least C-.

#### **E E 369L. Relay Protection of Power Systems.**

Theory, principles, and practices for protecting medium-voltage industrial power systems and high-voltage transmission grids. Includes symmetrical components; fault calculations and grounding; protection of motors, generators, cables, and transmission lines; and relay settings, fusing, and coordination of multiple protection devices. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Electrical Engineering 411 with a grade of at least C-.

#### **E E 370. Automatic Control II.**

Introduction to modern control theory, nonlinear and optimal control systems; controllability, observability, stability; state feedback, observers, eigenvalue assignment. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 362K.

#### **E E 370K. Computer Control Systems.**

Analysis and design of linear discrete time control systems; z-transform theory; modified z-transforms; stability; multirate systems; digital simulation of discrete time systems; synthesis of algorithms for computer controllers. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Electrical Engineering 362K.

#### **E E 370L. Introduction to Manufacturing Systems Automation.**

Applications of automation techniques to manufacturing systems; robotics and computer vision. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 362K with a grade of at least C-.

#### **E E 370N. Introduction to Robotics and Mechatronics.**

Structures for industrial robots; geometry and transformation; direct and inverse kinematics; differential kinematics; dynamics; trajectory planning; actuators and sensors; adaptive control and learning compliance; vision and pattern recognition; expert systems. Three

lecture hours a week for one semester. Prerequisite: Electrical Engineering 362K with a grade of at least C-.

#### **E E 471C. Wireless Communications Laboratory.**

The fundamentals of wireless communication from a digital signal processing perspective; linear modulation, demodulation, and orthogonal frequency division multiplexing; synchronization, channel estimation, and equalization; communication in fading channels; and wireless standards. Three lecture hours and three laboratory hours a week for one semester. Electrical Engineering 371C and 379K (Topic: Wireless Communications Laboratory) may not both be counted. Prerequisite: Electrical Engineering 445S (or 345S), 351M, or 360K with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

#### **E E 371D. Introduction to Neural Networks.**

Characteristics of artificial neural networks, feedforward networks, and recurrent networks; learning algorithms; self-organization; biological links; data mining and other applications. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 351K and Mathematics 340L with a grade of at least C- in each.

#### **E E 371M. Communication Systems.**

Analog and digital modulation; noise in communication systems; signal-to-noise ratio; coding; optimal receiver design; phase-locked loops; and performance analysis. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biomedical Engineering 335 or Electrical Engineering 351K.

#### **E E 371R. Digital Image and Video Processing.**

Digital image acquisition, processing, and analysis; algebraic and geometric image transformations; two-dimensional Fourier analysis; image filtering and coding. Three lecture hours a week for one semester. Prerequisite: Biomedical Engineering 335 or Electrical Engineering 351K with a grade of at least C-.

#### **E E 372L. Network Engineering Laboratory.**

Local, metropolitan, and wide-area operations; telecommunication common carrier organization and services; administrative and political considerations; premise distribution systems; name resolution, address assignment, and mail; datagrams, packets, frames, and cells; addressing and network-level interconnection; internetwork architecture; TCP/IP protocol suite (v. 4 and 6); Ethernet and IEEE 802.3 standards; IEEE 802.11 standards and wireless access points; repeaters, hubs, bridges, routers; local area network emulation; public switched network access through POTS and ISDN; intradomain and interdomain routing; routing protocols, including RIP, OSPF, and BGP; multicast; media testing; local- and wide-area diagnostic tools. The equivalent of three lecture hours a week for one semester. Prerequisite: Electrical Engineering 372N with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

#### **E E 372N. Telecommunication Networks.**

Circuit and packet-switched networks; local area networks; protocol stacks; ATM and broadband ISDN; Internet; routing, congestion control, and performance evaluation; multimedia applications. Three



lecture hours a week for one semester. Prerequisite: Electrical Engineering 351K with a grade of at least C-.

### **E E 372S. Cryptography and Network Security.**

Distributed information system security; cryptographic tools; authentication; message security; system management. The equivalent of three lecture hours a week for one semester. Prerequisite: Mathematics 325K or 340L with a grade of at least C-.

### **E E 374K. Biomedical Electronic Instrument Design.**

Application of electrical engineering principles in the design of electronic instrumentation at the circuit-board level for the measurement of pressure, temperature, flow, and impedance. Also includes the study of light intensity, bioelectric potentials, and stimulation devices such as pacemakers and defibrillators. Focus on design considerations specific to electro-medical environments, safety and efficacy, and public policy issues. Three lecture hours a week for one semester. Prerequisite: Electrical Engineering 438 with a grade of at least C-.

### **E E 374L. Applications of Biomedical Engineering.**

An in-depth examination of selected topics in biomedical engineering, such as optical and thermal properties of laser interaction with tissue; measurement of perfusion in the microvascular system; diagnostic imaging; interaction of living systems with electromagnetic fields; robotic surgical tools; ophthalmic instrumentation; noninvasive cardiovascular measurements. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Electrical Engineering 374K with a grade of at least C-; and credit with a grade of at least C- or registration for Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, Mechanical Engineering 333T, or Petroleum and Geosystems Engineering 333T.

### **E E 377E. Interdisciplinary Entrepreneurship: Elective.**

Same as Engineering Studies 377E. Restricted to engineering students. Projects must differ significantly from those developed for Electrical Engineering 364D and 364E. Focus on skill development and mentoring in start-up formation, technology development, market validation, marketing, sales, operations, human resources, program management, and finance. Includes discussion of intellectual property, social issues in design, as well as ethical and safety considerations. Emphasis on written and oral presentation of start-up activities. The equivalent of three lecture hours a week for one semester. Prerequisite: Consent of instructor.

### **E E 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Electrical Engineering 679HA with a grade of at least C- and enrollment in the Engineering Honors Program.

### **E E 379K. Topics in Electrical Engineering.**

The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

#### **Topic 1: Conference Course.**

**Topic 4: Solar Energy Conversion Devices.** Basic principles of photovoltaic devices which convert light in to charger carriers( electrons and holes). Electrons and holes in semiconductors, generation and recombination, junctions, analysis of the p-n junction, silicon and III-V semiconductor solar cell design and optimization, thin film solar cell technologies, managing light, strategies for higher efficiency, and a brief overview of non-photovoltaic approaches to solar energy conversion. Additional prerequisite: Electrical Engineering 339 with a grade of at least C-.

**Topic 15: Information Theory.** Measures of information; noiseless coding and data compression; discrete memoryless channels and channel capacity; broadcast channels; error-correcting codes. Additional prerequisite: Electrical Engineering 351K with a grade of at least C-.

#### **Topic 20: Computer Architecture: Personal Computer Design.**

Commercial general purpose processors, memory architecture, buses, storage devices, graphics subsystems, I/O devices and peripherals, audio subsystems, operating systems, benchmarking, manufacturing, and testing of personal computer systems. One class meeting may take place outside of normally scheduled class time for a tour of a PC manufacturing site. Additional prerequisite: Electrical Engineering 460N (or 360N) with a grade of at least C-.

**Topic 21: Information and Cryptography.** Information theory; construction of codes; cryptography, including security and randomized encryption; Kolmogorov complexity; statistics, including large deviations, nonparametrics, and information inequalities; Vapnik-Cervonenkis methods for learning theory. Additional prerequisite: Electrical Engineering 351K with a grade of at least C-.

## **Department of Mechanical Engineering**

### **Mechanical Engineering: M E**

#### **Lower-Division Courses**

#### **M E 302. Introduction to Engineering Design and Graphics.**

Introduction to mechanical engineering education and practice through lectures and laboratory experiences. Graphics and modeling fundamentals for engineering design: freehand sketching, computer modeling of solid geometry, and generation of engineering drawings. Introduction to reverse engineering, computer-aided design, rapid prototyping, and manufacturing. Application of the design process and problem solving through individual and team projects. Two lecture hours and four laboratory hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 302, 210, 210H. May not be taken concurrently with Mechanical Engineering 205. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K).

#### **M E 103. Studies in Engineering Design Graphics.**

Computer laboratory work in engineering design graphics for students with transfer credit for Mechanical Engineering 210 who need additional work. Three computer laboratory hours a week for one semester. May not be counted by students with credit for

Mechanical Engineering 302, 210, or 210H. Prerequisite: Consent of the undergraduate adviser.

### **M E 205. Introduction to Computers and Programming.**

Introduction to computer hardware and software systems; programming using a high-level language; mathematical software programming; and introduction to machine language. Includes significant hands-on programming opportunities. One lecture hour and three laboratory hours a week for one semester. May not be taken concurrently with Mechanical Engineering 302. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K).

### **M E 210. Engineering Design Graphics.**

Graphics and modeling fundamentals for engineering design: freehand sketching, computer modeling of solid geometry, and generation of engineering drawings. Introduction to reverse engineering, computer-aided design, rapid prototyping, and manufacturing. Application of the design process to problem solving. Individual and team design projects. Two lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 302, 210, 210H. May not be counted toward the Bachelor of Science in Mechanical Engineering degree. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K).

### **M E 210H. Engineering Design Graphics: Honors.**

Graphics and modeling fundamentals for engineering design: freehand sketching, computer modeling of solid geometry, and generation of engineering drawings. Introduction to reverse engineering, computer-aided design, rapid prototyping, and manufacturing. Application of the design process to problem solving. Individual and team design projects. One lecture hour and four laboratory hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 302, 210, 210H. May not be counted toward the Bachelor of Science in Mechanical Engineering degree. Prerequisite: Credit or registration for Mathematics 408C or 408K (or credit for 308K), and admission to an engineering honors program.

### **M E 311. Materials Engineering.**

Fundamental aspects of the structure, properties, and behavior of engineering materials. Three lecture hours a week for one semester. Prerequisite: Chemistry 301, Engineering Mechanics 319, Mechanical Engineering 302, 205, and 326, and Physics 303K and 103M with a grade of at least C- in each; and credit or registration for Mechanical Engineering 111L, Physics 303L, and 103N.

### **M E 111L. Materials Engineering Laboratory.**

Hands-on experiments in materials science and engineering topics and microstructure-property relationships discussed in Mechanical Engineering 311. One to one and one-half lecture hours and three laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 302 and 205 with a grade of at least C- in each, and credit or registration for Mechanical Engineering 311.

### **M E 218. Engineering Computational Methods.**

Applied numerical analysis, programming of computational algorithms using mathematical software, and applications of computational methods to the solution of mechanical engineering problems. One and one-half lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Mathematics 427K and Mechanical Engineering 205 with a grade of at least C- in each.

## **Upper-Division Courses**

### **M E 320. Applied Thermodynamics.**

First and second laws of thermodynamics; thermodynamic processes, cycles, and heat transfer. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Mechanical Engineering degree. Prerequisite: Chemistry 301, Mathematics 408D, and Physics 303K.

### **M E 324. Dynamics.**

Analysis of motions, forces, momenta, and energies in mechanical systems. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Engineering Mechanics 306 and Mathematics 408D with a grade of at least C- in each.

### **M E 325L. Cooperative Engineering.**

This course covers the work period of mechanical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. The student must complete Mechanical Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. May be repeated for credit. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Mechanical Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Mechanical Engineering 325LY and appointment for a full-time cooperative work tour.

### **M E 225M. Cooperative Engineering.**

This course covers the work period of mechanical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Mechanical Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Mechanical Engineering 225MA and appointment for a full-time cooperative work tour.

### **M E 125N. Cooperative Engineering.**

This course covers the work period of mechanical engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Mechanical Engineering 325LZ or 225MB, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

### **M E 326. Thermodynamics.**

Properties, heat and work, first and second laws, thermodynamic processes, introduction to ideal power cycles. Three lecture hours a week for one semester. For some sections, two discussion hours a week are also required. Mechanical Engineering 326 and 326H may not both be counted. Prerequisite: Chemistry 301, Mathematics 408D, and Physics 303K with a grade of at least C- in each.

### **M E 326H. Thermodynamics: Honors.**

Properties, heat and work, first and second laws, thermodynamic processes, introduction to ideal power cycles. Three lecture hours a week for one semester. For some sections, two discussion hours a week are also required. Mechanical Engineering 326 and 326H may not both be counted. Prerequisite: Chemistry 301, Mathematics 408D,

and Physics 303K with a grade of at least C- in each, and admission to an engineering honors program.

### **M E 330. Fluid Mechanics.**

Fluid properties, statics, conservation laws, inviscid and viscous incompressible flow, flow in confined streams and around objects. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Engineering Mechanics 306, and Mechanical Engineering 326 or 326H with a grade of at least C- in each; and credit or registration for Mechanical Engineering 130L.

### **M E 130L. Experimental Fluid Mechanics.**

Experimental design concepts, uncertainty analysis, and systems analysis as applied to thermodynamics, fluid mechanics, and heat transfer systems. One lecture hour and two laboratory hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 330.

### **M E 333H. Engineering Communication: Honors.**

Professional communication skills for engineers, with emphasis on research, writing, editing, and oral presentation on topics of social and technical significance in engineering. Students collaborate to publish an online journal. Two lecture hours and two laboratory hours a week for one semester. Mechanical Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306 with a grade of at least C-, and admission to an appropriate major sequence in engineering and to an engineering honors program.

### **M E 333T. Engineering Communication.**

Professional communication skills for engineers, with emphasis on research, writing, and oral presentation on topics of social and technical significance in engineering. Two lecture hours and two laboratory hours a week for one semester. Mechanical Engineering 333H and 333T may not both be counted. Prerequisite: Rhetoric and Writing 306 with a grade of at least C-, and admission to an appropriate major sequence in engineering.

### **M E 335. Engineering Statistics.**

Fundamentals of probability, distribution theory, data analysis and statistics, interval estimation, hypothesis testing, and statistical quality control. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Mathematics 408D and Mechanical Engineering 205 with a grade of at least C- in each, and admission to an appropriate major sequence in engineering.

### **M E 336. Materials Processing.**

Effects of processing on materials properties; materials selection. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 311 and 111L and Engineering Mechanics 319 with a grade of at least C- in each, concurrent enrollment in Mechanical Engineering 136L, and admission to an appropriate major sequence in engineering.

### **M E 136L. Materials Processing Laboratory.**

Hands-on study of selected materials processing procedures and processing-microstructure-property relationships discussed in Mechanical Engineering 336. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 111L and Engineering Mechanics 319 with a grade of at least C- in each, concurrent enrollment in Mechanical Engineering 336, and admission to an appropriate major sequence in engineering.

### **M E 136N, 236N. Concepts in Nuclear and Radiation Engineering.**

Restricted to students in the Colleges of Engineering, Liberal Arts, and Natural Sciences, and the Jackson School of Geosciences. For Mechanical Engineering 136N, one lecture hour a week for one semester; for 236N, the equivalent of two lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of college coursework, or consent of instructor.

### **M E 337C. Introduction to Nuclear Power Systems.**

Radioactivity, nuclear interactions: fission and fusion, fission reactors, nuclear power systems, nuclear power safety. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 218 and Physics 303L and 103N with a grade of at least C- in each, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

### **M E 337F. Nuclear Environmental Protection.**

Ionizing radiation and its interactions with matter and living tissues; radioactive decay kinetics; external and internal dose measurement; transportation through the environment; managing radioactive waste streams; and safeguards. Three lecture hours a week for one semester. May not be counted by students with credit for Mechanical Engineering 337D and 337E. Mechanical Engineering 337F and 389C may not both be counted. Prerequisite: For engineering majors, Physics 303L and 103N with a grade of at least C- in each and admission to an appropriate major sequence in engineering; for others, upper-division standing.

### **M E 337G. Nuclear Safety and Security.**

Probabilistic risk assessment models and nuclear arms nonproliferation, including failure classifications; failure mode, effects, and criticality analysis (FMECA); fault and event trees; and reliability block diagrams. Discussion of specific areas from the Code of Federal Regulations. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 337G, 388H, Operations Research and Industrial Engineering 390R (Topic 15: Nuclear Safety and Security). Prerequisite: For engineering majors, Physics 103N and 303L with a grade of at least C- in each and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 338. Machine Elements.**

Analysis for the design and manufacture of basic mechanical elements, and their role in the design of machines; application of finite element modeling. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 and Mechanical Engineering 311 with a grade of at least C- in each, and admission to an appropriate major sequence in engineering.

### **M E 339. Heat Transfer.**

Steady and transient heat conduction; forced and natural convection; radiation; introduction to heat exchangers and applications. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 218, 330, and 130L with a grade of at least C- in each, concurrent enrollment in Mechanical Engineering 139L, and admission to an appropriate major sequence in engineering.

### **M E 139L. Experimental Heat Transfer.**

Experimental design concepts, uncertainty analysis, and systems analysis as applied to thermodynamics, fluid mechanics, and heat transfer systems. One lecture hour and two laboratory hours a week

for one semester. Prerequisite: Concurrent enrollment in Mechanical Engineering 339 and admission to an appropriate major sequence in engineering.

#### **M E 340. Mechatronics.**

Theory and application of electrical circuits, electronics, and electromechanical devices; concepts in electrical power transmission; instrumentation; feedback; integration of electronics and instrumentation with mechanical engineering systems (mechatronics). Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, Mechanical Engineering 205, and Physics 303L and 103N with a grade of at least C- in each, concurrent enrollment in Mechanical Engineering 140L, and admission to an appropriate major sequence in engineering.

#### **M E 140L. Mechatronics Laboratory.**

Hands-on laboratory using hand-held and bench-top electronic test and prototyping equipment for circuits and mechatronics applications; computer-aided instrumentation and data acquisition; laboratory study in design, prototyping, and testing with electrical and electronics components and electromechanical devices. One lecture hour and two laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 205, concurrent enrollment in Mechanical Engineering 340, and admission to an appropriate major sequence in engineering.

#### **M E 343. Thermal-Fluid Systems.**

Analysis and design of integrated systems involving simultaneous application of thermodynamics, heat transfer, and fluid mechanics. Applications to power generation, vehicle engineering, materials processing, environmental control, and manufacturing. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Mechanical Engineering 330, 130L, 339, and 139L with a grade of at least C- in each; and admission to an appropriate major sequence in engineering.

#### **M E 344. Dynamic Systems and Controls.**

Lumped physical system models; electrical, fluid, mechanical, and thermal system analysis; linear system transient, steady-state behavior; introduction to feedback control. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K and Mechanical Engineering 205 and 324 with a grade of at least C- in each; Mechanical Engineering 340 and 140L or their equivalents with a grade of at least C- in each; concurrent enrollment in Mechanical Engineering 144L or 244L; and admission to an appropriate major sequence in engineering.

#### **M E 144L, 244L. Dynamic Systems and Controls Laboratory.**

Modeling of engineering systems, digital simulation, and assessment of results with experimental study; methods for analysis of first- and second-order systems, system identification, frequency response and feedback control principles; hands-on experimentation with mechanical, fluid, electrical, and magnetic systems; data acquisition and analysis using oscilloscopes and microcomputer-based analog-to-digital and digital-to-analog conversion; theoretical and practical principles governing the design and use of various sensors and transducers. For 144L, one lecture hour and two laboratory hours a week for one semester; for 244L, one lecture hour and three laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Mechanical Engineering 344, and admission to an appropriate major sequence in engineering.

#### **M E 347. Processing of Materials.**

Analysis of forces in processing operations; effects of friction and their control; metalworking efficiencies. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For engineering majors, Mechanical Engineering 336, credit or registration for Mechanical Engineering 136L, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

**Topic 1: Powder Processing.** Powder particle characterization and size/shape/distribution, powder synthesis, compaction, sintering theory, sintering maps, full-density processing, powder-processed part microstructure and properties.

**Topic 2: Deformation Processing.** Analysis of forces in processing operations; effects of friction and their control; slab method; upper-bound force theory; slip-line field theory; metalworking efficiencies.

#### **M E 348C. Introduction to Mechatronics I.**

Integrated use of mechanical, electrical, and computer systems for information processing and control of machines and devices. System modeling, electromechanics, sensors and actuators, basic electronics design, signal processing and conditioning, noise and its abatement, grounding and shielding, filters, and system interfacing techniques. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: For engineering majors, Electrical Engineering 331 and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

#### **M E 348D. Introduction to Mechatronics II.**

Interfacing microcomputers with sensors and actuators; hybrid (analog/digital) design; digital logic and analog circuitry; data acquisition and control; microcomputer architecture, assembly language programming; signal conditioning, filters, analog-to-digital and digital-to-analog conversion. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: For engineering majors, Electrical Engineering 331 and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

#### **M E 349. Corrosion Engineering.**

Corrosion principles; electrochemical, environmental, and metallurgical effects; types of corrosion; corrosion testing and prevention; modern theories: principles and applications. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C-, Mechanical Engineering 326 (or 326H) or the equivalent with a grade of at least C-, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

#### **M E 350. Machine Tool Operations for Engineers.**

Hands-on manual and computer-numerical-controlled machine tool operation. Part design and tool selection for production. One lecture hour and six laboratory hours a week for one semester. Mechanical Engineering 350 and 379M (Topic 7: Machine Tool Operations for Engineers) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Admission to an appropriate major sequence in engineering.

#### **M E 352K. Engineering Computer Graphics.**

Introduction to interactive computer graphics as a tool in computer-aided design. Use of graphics software packages. Two lecture hours



and three laboratory hours a week for one semester. Prerequisite: For engineering majors, admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 353. Engineering Finance.**

Evaluating the financial impact of engineering decisions. Comparing alternatives with cash flow analysis considering rate of return, inflation, and taxes, with emphasis on analyzing risk. Managing complex projects with activity scheduling and resource allocation considering cash flows. Methods include probabilistic analysis and simulation. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Mathematics 408C, Mechanical Engineering 205, and 335 with a grade of at least C- in each, and admission to an appropriate major sequence in engineering.

### **M E 354. Introduction to Biomechanical Engineering.**

The application of mechanical engineering principles to problems in the life sciences; transport phenomena of physiological solids and fluids; biosignal analysis and instrumentation; biomaterials design and compatibility; principles of medical imaging, diagnostics, and therapeutics; rehabilitation engineering. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mathematics 427K with a grade of at least C- and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 354M. Biomechanics of Human Movement.**

Modeling and simulation of human movement; neuromuscular control; computer applications; introduction to experimental techniques. Three lecture hours a week for one semester. Prerequisite: For engineering majors, admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

### **M E 355K. Engineering Vibrations.**

Time-domain and frequency-domain analysis of vibrating systems; matrix methods, instrumentation, and vibration control; numerical methods. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 324 with a grade of at least C-, Mathematics 427K with a grade of at least C-, and admission to an appropriate major sequence in engineering.

### **M E 259, 359. Materials Selection.**

Description of commercial metals, polymers, ceramics, concrete, and wood for use in mechanical engineering applications. Applications include strength, toughness, stiffness, fatigue, creep, corrosion, casting, forming, machining, and welding. Two or three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 336 and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

### **M E 360. Vehicle System Dynamics and Controls.**

Fundamentals of ground vehicle dynamics, tire-road mechanics, vehicle control systems, vehicle stability, and simulation of vehicle systems. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 360, 379M (Topic: Vehicle System Dynamics and Controls), 390, 397 (Topic: Vehicle System Dynamics and Controls). Prerequisite: For engineering majors, upper-division standing, admission to an appropriate major sequence in engineering, and Mechanical Engineering 344 with a grade of at

least C-; for others, upper-division standing and written consent of instructor.

### **M E 260K, 360K. Metallurgy of Engineering Alloys.**

Microstructure and property relationships of metals and alloys; steel alloys; aluminum alloys; titanium alloys; magnesium alloys; solidification and casting; thermomechanical processing; heat treating and solid-state phase transformations. Two or three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 with a grade of at least C-, credit or registration for Mechanical Engineering 111L, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

### **M E 360L. Turbomachinery and Compressible Flow.**

Positive displacement and dynamic rotating machinery; pumps, compressors, and turbines; performance characteristics and scaling laws. One-dimensional compressible flow with area change, friction, or heat addition. Normal and oblique shock waves; Prandtl-Meyer expansion. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 330, 130L and 139L, and admission to an appropriate major sequence in engineering.

### **M E 360N. Intermediate Heat Transfer.**

Multidimensional and transient diffusion; laminar and turbulent convection; radiation exchange; special topics. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 339 and admission to an appropriate major sequence in engineering.

### **M E 361E. Nuclear Reactor Operations and Engineering.**

Fission and chain reactions; neutron diffusion and moderation; reactor equations; Fermi Age theory; and multigroup and multiregional analysis. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 218 and Physics 303L and 103N with a grade of at least C- in each, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 361F. Radiation and Radiation Protection Laboratory.**

Introduction to the application of radiation and radiation protection instrumentation. Lecture and laboratory topics include personnel monitoring, radiation detection systems, gamma-ray spectroscopy, determination of environmental radiation, counting statistics, gamma and neutron shielding, and air sampling. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 218 with a grade of at least C-, Physics 303L and 103N with a grade of at least C- in each, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 261M, 361M. Materials Thermodynamics.**

First and second laws; heat of combustion; heat engine cycles; chemical equilibria and/or phase equilibria; point defects in crystals. Two or three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 with a grade of at least C-, Mechanical Engineering 326 or 326H with a grade of at least C-, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 362K. Readings in Engineering.**

A study of the interrelated problems of society, technology, and energy. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K,

377K. Prerequisite: Admission to an appropriate major sequence in engineering.

#### **M E 363L. Energy Systems Laboratory.**

Experimental analysis of thermal energy systems, including heat transfer equipment, engines, the University chilling station and the University power plant. Use of a variety of industrial instrumentation for assessment of system and component performance and of experimental uncertainty. Written and oral technical communication of experimental results. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 339, 139L, 343, and admission to an appropriate major sequence in engineering.

#### **M E 364L. Automatic Control System Design.**

Feedback principles; control components; industrial compensators; Routh, Nyquist, Bode, and root locus methods; controller design; continuous and discrete time control. Three lecture hours and one-half laboratory hour a week for one semester. Prerequisite: Mechanical Engineering 344 and admission to an appropriate major sequence in engineering.

#### **M E 365K. Finite Element Method.**

Introduction and application of the finite element method in engineering analysis and design problems; demonstration of techniques using commercial codes. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 319 and Mathematics 427K with a grade of at least C- in each, and admission to an appropriate major sequence in engineering.

#### **M E 365L. Industrial Design for Production.**

Current techniques for making transitions from theoretical concepts to cost effective designs suitable for manufacturing. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 338 and admission to an appropriate major sequence in engineering.

#### **M E 366J. Mechanical Engineering Design Methodology.**

Structured methodologies for designing mechanical systems; reverse engineering/redesign projects and conceptual design projects. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 302, 330, 130L, 335, 336, 136L, 338, 339, 139L, 340, and 140L with a grade of at least C- in each; Mechanical Engineering 333H, 333T, Aerospace Engineering 333T, Biomedical Engineering 333T, Chemical Engineering 333T, Civil Engineering 333T, Electrical Engineering 333T, or Petroleum and Geosystems Engineering 333T with a grade of at least C-; and admission to an appropriate major sequence in engineering.

#### **M E 266K. Mechanical Engineering Design Project.**

Creative design, analysis, selection, development, and fabrication of engineering components and systems. Development of team project with faculty adviser and sponsoring engineer. Two lecture hours a week for one semester, with additional hours to be arranged. Prerequisite: Mechanical Engineering 343, 344, 144L or 244L, 353, and 366J with a grade of at least C- in each.

#### **M E 366L. Operations Research Models.**

Formulation and solution-interpretation for operations research models requiring, for example, optimization, simulation, or analysis of Markov chains or queues. Applications include manufacturing design and control, routing and scheduling, plant location, inventory analysis, and management of queueing systems. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mathematics 408D

and Mechanical Engineering 205 with a grade of at least C- in each, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

#### **M E 266P. Design Project Laboratory.**

Development of individual team project in association with faculty adviser and sponsoring project engineer. Four laboratory hours a week for one semester. Prerequisite: Mechanical Engineering 343, 344, 144L or 244L, 353, and 366J with a grade of at least C- in each.

#### **M E 366Q. Deterministic Methods for Operations Research.**

Theory and algorithms for deterministic operations research methods. Algorithms for solving linear, integer, and nonlinear optimization models. Three lecture hours a week for one semester. Prerequisite: For engineering majors, admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

#### **M E 366R. Stochastic Methods for Operations Research.**

Theory and algorithms for stochastic operations research methods. Algorithms related to stochastic processes: Markov chain analysis; queueing theory; stochastic inventory theory and decision analysis. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for nonengineering majors, upper-division standing and written consent of instructor.

#### **M E 367S. Simulation Modeling.**

Basic concepts of discrete-event simulation. Statistical input and output analysis. Application of simulation software. Modeling of systems under uncertainty. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 205 with a grade of at least C-, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

#### **M E 368J. Computer-Aided Design.**

Application of computers to design problems and simulation of mechanical systems; creation of interactive special applications programs. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 338 and admission to an appropriate major sequence in engineering.

#### **M E 369L. Introduction to Computational Fluid Dynamics.**

Applied numerical analysis, including solution of linear algebraic equations and ordinary and partial differential equations; modeling of physical processes, including fluid flow and heat and mass transfer; use of general purpose computer codes, including commercial computational fluid dynamics software packages. Three lecture hours a week for one semester. Aerospace Engineering 347 and Mechanical Engineering 369L may not both be counted. Prerequisite: Credit or registration for Mechanical Engineering 330 and 339 and admission to an appropriate major sequence in engineering.

#### **M E 371K. Legal Aspects of Engineering Practice.**

Legal considerations in the practice of engineering; specifications and contracts for equipment and engineering services. Three lecture hours a week for one semester. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. Prerequisite: Upper-

division standing and admission to an appropriate major sequence in engineering.

#### **M E 372J. Robotics and Automation.**

Component technologies for precision machines based on dynamic modeling and motion programming: cams, linkages, planar manipulators. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 324 and admission to an appropriate major sequence in engineering.

#### **M E 372M. Mechanism Design.**

Design of planar mechanisms for applications that require rigid body guidance, function generation, and path generation. Graphical and analytical techniques. Computer-aided design projects. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 324 and admission to an appropriate major sequence in engineering.

#### **M E 372N. Design of Smart Mechanisms.**

Design of reprogrammable multiple-degree-of-freedom architectures. The course addresses various mechanical configurations and stresses the integrated design approach to sensing/actuation/control architecture and control software. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of instructor.

#### **M E 373K. Basic Industrial Engineering.**

Design and analysis of production systems, including plant layout and location, material flow, and flexible manufacturing. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 205 or the equivalent with a grade of at least C-, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

#### **M E 374C. Combustion Engine Processes.**

Principles of internal combustion engines, fuels, carburetion, combustion, exhaust emissions, knock, fuel injection, and factors affecting performance. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 343 or consent of instructor, and admission to an appropriate major sequence in engineering.

#### **M E 374D. Automotive Engineering Laboratory.**

Engines and emissions. Students use commercial engine-modeling software to explore effects of valve timing and intake tuning and conduct experiments with vehicle emissions, ignition timing, engine mechanisms, engine controls, and emissions control. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 374C and admission to an appropriate major sequence in engineering.

#### **M E 374F. Fire Science.**

Analysis of the dynamics and consequences of fire in structures. Topics include combustion thermochemistry, premixed and diffusion flames, fluid mechanics of fire, human tenability in burning structures, and computer modeling of fires. Three lecture hours a week for one semester. Prerequisite: For engineering majors, upper-division standing and credit or registration for Mechanical Engineering 339 and 139L with a grade of at least C- in each; for others, upper-division standing and written consent of instructor.

#### **M E 374L. Design of Thermal Systems.**

Methodology and approach to design of thermal energy systems; component and system modeling; optimization, including economic considerations. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 339 or the equivalent, credit or registration for Mechanical Engineering 343, and admission to an appropriate major sequence in engineering.

#### **M E 374R. Design of Air Conditioning Systems.**

Load calculations, design of thermal distribution systems, component selection and control. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mechanical Engineering 343.

#### **M E 374S. Solar Energy Systems Design.**

Insolation characteristics and measurement, component design, solar energy system modeling, introduction to photovoltaic systems, cost analysis, and case studies. Three lecture hours a week for one semester. Prerequisite: Mechanical Engineering 339 or the equivalent and admission to an appropriate major sequence in engineering.

#### **M E 375K. Production Engineering Management.**

Introduction to production and inventory models; basic factory dynamics; analysis of variability; push-and-pull production control; sequencing and dispatching. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 205 or the equivalent with a grade of at least C-, Mechanical Engineering 335 or the equivalent, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

#### **M E 177K, 277K, 377K. Projects in Mechanical Engineering.**

Independent project carried out under the supervision of a faculty member in mechanical engineering. Student prepares a project proposal and a final report, each of which is evaluated by the faculty committee on individual projects. For 177K, three to five laboratory hours and one consultation hour with the faculty supervisor a week for one semester; for 277K, five to ten laboratory hours and one consultation hour with the faculty supervisor a week for one semester; for 377K, ten to fifteen laboratory hours and one consultation hour with the faculty supervisor a week for one semester. Only one of the following may be counted: Mechanical Engineering 325L, 362K, 371K, 377K. Prerequisite: A University grade point average of at least 2.50 and a grade point average in the major of at least 2.50; admission to an appropriate major sequence in engineering; and approval of project proposal by the faculty committee on individual projects.

#### **M E 378C. Electroceramics.**

Bonding; crystal structures; defects; phase diagrams; glass ceramics; electrical, dielectric, magnetic, and optical ceramics. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C- and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

#### **M E 378K. Mechanical Behavior of Materials.**

Elastic deformation; viscoelasticity; yielding, plastic flow, plastic instability, strengthening mechanisms; fracture, fatigue, creep; significance of mechanical properties tests. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 336 and 136L with a grade of at least C- in each, and

admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 378P. Properties and Applications of Polymers.**

Introduction to polymers as structural materials: polymerization, polymer structure, physical and mechanical properties, processing and fabrication. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C-, Mechanical Engineering 326 or 326H or the equivalent with a grade of at least C-, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 378S. Structural Ceramics.**

Powder processing, powder characterization, forming techniques, densification, and development of microstructure; emphasis on understanding materials, selection, and microstructure-mechanical property relationships. Three lecture hours a week for one semester. Prerequisite: For engineering majors, Mechanical Engineering 311 or the equivalent with a grade of at least C-, and admission to an appropriate major sequence in engineering; for others, upper-division standing and written consent of instructor.

### **M E 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Mechanical Engineering 679HA and enrollment in the Engineering Honors Program.

### **M E 179M, 279M, 379M. Topics in Mechanical Engineering.**

One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to an appropriate major sequence in engineering; additional prerequisites vary with the topic and are given in the Course Schedule.

### **M E 379N. Engineering Acoustics.**

Same as Electrical Engineering 363N. Principles of acoustics, with applications drawn from audio engineering, biomedical ultrasound, industrial acoustics, noise control, room acoustics, and underwater sound. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.

## **Department of Petroleum and Geosystems Engineering**

### **Petroleum and Geosystems Engineering: PGE**

#### **Lower-Division Courses**

#### **PGE 301. Engineering, Energy, and the Environment.**

Enrollment limited to beginning students in petroleum and geosystems engineering. Overview of energy supply and demand. Studies

subsurface engineering and engineering problem-solving methods, with an emphasis on fossil energy exploitation and geologic CO<sub>2</sub> storage. Includes aspects of basic petroleum geology. Two lecture hours and three laboratory hours a week for one semester. May not be counted by students with credit for Petroleum and Geosystems Engineering 102 and 203. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-.

#### **PGE 305. Energy and the Environment.**

The forms of current and potential energy sources, and how these might impact the earth's environment. Three lecture hours and one and one-half laboratory hours a week for one semester. May not be counted toward a degree in geological sciences, geosystems engineering and hydrology, or petroleum engineering.

#### **PGE 310. Formulation and Solution of Geosystems Engineering Problems.**

Introduction to mathematical equations typically encountered in petroleum and geosystems engineering; methods to solve equations graphically, analytically, and with numerical methods; applications of computers to problem solving. Three lecture hours a week for one semester. Prerequisite: Physics 303K and 103M and credit or registration for Mathematics 427K.

#### **PGE 312. Physical and Chemical Behavior of Fluids I.**

Principles of organic chemistry; phase behavior; properties of hydrocarbon gases and liquids and oil field waters; overview of laboratory phase behavior measurements; material balance calculations. Three lecture hours a week for one semester. Prerequisite: Chemistry 302 with a grade of at least C-.

### **Upper-Division Courses**

#### **PGE 421K. Physical and Chemical Behavior of Fluids II.**

Applications of thermodynamics and physical chemistry to petroleum and geosystems engineering. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 326, and admission to an appropriate major sequence in engineering or consent of instructor.

#### **PGE 322K. Transport Phenomena in Geosystems.**

Applications of mass, heat, and momentum balances to fluid flow problems; shell balances; non-Newtonian fluids; transport processes through permeable media. Three lecture hours a week for one semester. Prerequisite: Engineering Mechanics 306 and Mathematics 427K with a grade of at least C- in each.

#### **PGE 323K. Reservoir Engineering I: Primary Recovery.**

Classification of subsurface reservoirs by type and recovery mechanism; reserve estimates based on material balance; steady-state and transient fluid flow in permeable reservoir rocks as applied to subsurface engineering problems. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 323K and 331 may not both be counted. Prerequisite: Petroleum and Geosystems Engineering 312 and credit or registration for Petroleum and Geosystems Engineering 424.

#### **PGE 323L. Reservoir Engineering II: Secondary and Tertiary Recovery.**

Introduction to reservoir displacement processes; water and gas injection; enhanced recovery. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 323 and 323L may not both be counted. Prerequisite: Petroleum and Geosystems



Engineering 322K, 323K, 424, Mathematics 427K, and admission to the major sequence.

### **PGE 323M. Reservoir Engineering III: Numerical Simulation.**

Mathematical equations governing fluid flow in reservoirs; numerical methods to solve the equations; numerical reservoir simulation; treatment of wells; history matching; a simulation project performed using a commercial simulator. Three lecture hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 323L.

### **PGE 424. Petrophysics.**

Properties of rocks; measurement and interpretation of petrophysical properties; application of petrophysics to subsurface engineering problems; interaction of resident fluids with rocks. Extensive written reporting. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: For petroleum engineering majors and geosystems engineering and hydrogeology majors, Petroleum and Geosystems Engineering 333T, credit or registration for Petroleum and Geosystems Engineering 322K, and admission to the major sequence; for others, consent of instructor.

### **PGE 325L. Cooperative Engineering.**

This course covers the work period of petroleum engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for three semesters. The student must complete Petroleum and Geosystems Engineering 325LX, 325LY, and 325LZ before a grade and degree credit are awarded. Prerequisite: For 325LX, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 325LY, Petroleum and Geosystems Engineering 325LX and appointment for a full-time cooperative work tour; for 325LZ, Petroleum and Geosystems Engineering 325LY and appointment for a full-time cooperative work tour.

### **PGE 225M. Cooperative Engineering.**

This course covers the work period of petroleum engineering students in the Cooperative Engineering Program. Forty laboratory hours a week for two semesters. The student must complete Petroleum and Geosystems Engineering 225MA and 225MB before a grade and degree credit are awarded. Prerequisite: For 225MA, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour; for 225MB, Petroleum and Geosystems Engineering 225MA and appointment for a full-time cooperative work tour.

### **PGE 125N. Cooperative Engineering.**

Covers the work period of petroleum engineering students in the Cooperative Engineering Program. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Petroleum and Geosystems Engineering 325L or 225M, application to become a member of the Cooperative Engineering Program, approval of the dean, and appointment for a full-time cooperative work tour.

### **PGE 326. Thermodynamics and Phase Behavior.**

Application of classical thermodynamics to the behavior of fluids, with emphasis on phase behavior of multicomponent mixtures. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors and geosystems engineering and hydrogeology majors, Petroleum and Geosystems Engineering 312, Mathematics 427K, and admission to the major sequence; for others, consent of instructor.

### **PGE 430. Drilling and Well Completions.**

Elements of rock mechanics, drilling fluids, factors affecting rate of penetration, and well completions, including casing and tubing design. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Engineering Mechanics 319 with a grade of at least C-, credit or registration for Petroleum and Geosystems Engineering 322K, and admission to the major sequence.

### **PGE 333T. Engineering Communication.**

Advanced technical communication skills, with emphasis on writing strategies for technical documents, oral presentations, and visual aids. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306 with a grade of at least C-.

### **PGE 334. Reservoir Geomechanics.**

Basic stress and strain analysis; pore pressure and in situ stress estimation and measurement; deformation mechanisms in rock; rock fracture description and analysis; wellbore stresses and failure; wellbore stability analysis; fault stability analysis; depletion-induced reservoir deformation; and hydraulic fracturing. Emphasis on applications to petroleum engineering. Two lecture hours and three laboratory hours a week for one semester. Petroleum and Geosystems Engineering 432 and 334 may not both be counted. Prerequisite: Engineering Mechanics 319, Geological Sciences 416M, and admission to the major sequence.

### **PGE 337. Introduction to Geostatistics.**

Basic probability and statistics, study of correlated variables, statistical interpolation and simulation, and global optimization. Emphasis is on the ways the results of these procedures are related to geology and fluid flow. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors, Petroleum and Geosystems Engineering 310, Mathematics 408D or the equivalent, and admission to the major sequence; for others, Petroleum and Geosystems Engineering 210, and Mathematics 408D or the equivalent.

### **PGE 361. Advanced Reservoir Engineering.**

Secondary recovery methods; computer simulation of reservoir performance; applications to field problems. Three lecture hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 326 and 323K (or 331).

### **PGE 362. Production Technology and Design.**

Analysis, specification, and characteristics of production systems; inflow performance; wellbore and tubing hydraulics; and artificial lift. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors, credit or registration for Petroleum and Geosystems Engineering 430 and admission to the major sequence; for others, consent of instructor.

### **PGE 363. Petroleum Leasing Regulations and Practices.**

Domestic and worldwide regulations associated with petroleum leasing, including offshore areas, and environmental provisions concerning petroleum exploration and production. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Petroleum and Geosystems Engineering 365 or the equivalent, and upper-division standing or consent of instructor.

### **PGE 364. Natural Gas Engineering.**

Production, transportation, and storage of gas; metering and gauging; performance of wells; estimation of gas reserves; prevention of waste and utilization of natural gas. Three lecture hours a week for one semester. Prerequisite: For petroleum engineering majors, Petroleum

and Geosystems Engineering 326, 323K (or 331), and 362 and admission to the major sequence; for others, upper-division standing and consent of instructor.

#### **PGE 365. Resource Economics and Valuation.**

Derivation of profitability criteria for earth resource investments, project analysis in terms of the interrelation of technical and economic factors, investment analysis in the presence of uncertainty, and project planning. Three lecture hours a week for one semester. Prerequisite: Admission to an appropriate major sequence in engineering or consent of instructor.

#### **PGE 368. Fundamentals of Well Logging.**

Principles, applications, and interpretation of well logs as used in exploration and evaluation of subsurface formations. Three lecture hours a week for one semester. Prerequisite: Geological Sciences 416M and Petroleum and Geosystems Engineering 424, and admission to an appropriate major sequence in engineering or consent of instructor.

#### **PGE 371. Energy Finance.**

Fundamentals of finance as applied to the petroleum industry, including petroleum project financing techniques, investigating sources of capital, and methods used to evaluate an oil company's financial performance. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Petroleum and Geosystems Engineering 365 or the equivalent, and admission to an appropriate major sequence in engineering or consent of instructor.

#### **PGE 372. Advanced Drilling and Well Completions.**

Applications of geomechanics in wellbore and near-wellbore problems encountered in drilling and completing high-pressure, high-temperature wells on land and water locations. Three lecture hours a week for one semester. Petroleum and Geosystems Engineering 372 and 379 (Topic: Advanced Drilling and Well Completions) may not both be counted. Prerequisite: Petroleum and Geosystems Engineering 430 and 334 (or 432).

#### **PGE 373K. Geosystems Engineering Design and Analysis I.**

Analysis and design of subsurface injection and extraction systems, project organization, fundamentals of operations research, oral and written reporting, graphical presentations and use of visual aids, use of computer-aided engineering, and impact of ethical and economic issues on design. Three lecture hours a week for one semester, with one additional hour a week to be arranged. Prerequisite: Petroleum and Geosystems Engineering 323L (or 323) or the equivalent, Petroleum and Geosystems Engineering 333T and 365, and admission to an appropriate major sequence in engineering or consent of instructor.

#### **PGE 373L. Geosystems Engineering Design and Analysis II.**

Team-oriented design projects involving the application of geologic and engineering methods to the solution of subsurface problems, using field case histories. Projects are selected for each student based on his or her petroleum engineering technical area option. Three lecture hours a week for one semester, with one additional hour a week to be arranged. Petroleum and Geosystems Engineering 373L and 374 may not both be counted. Prerequisite: For petroleum engineering majors, Petroleum and Geosystems Engineering 323K (or 331), 362, 368, and 373K; for others, upper-division standing and consent of instructor.

#### **PGE 176, 276, 376. Special Problems in Petroleum and Geosystems Engineering.**

Independent investigation of an advanced subject in petroleum and geosystems engineering, for superior students only. Conference course. Prerequisite: Admission to an appropriate major sequence in engineering and written consent of instructor.

#### **PGE 377. Deepwater Operations.**

Overview of various technical, logistical, and managerial elements that are functionally integrated in deepwater operations, with emphasis on applications in the Gulf of Mexico. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in the Cockrell School of Engineering.

#### **PGE 378. Applied Reservoir Characterization.**

Reservoir modeling using software tools for statistical analysis of reservoir data; variogram analysis and modeling; spatial interpolation (kriging); tools for data integration in kriging; stochastic simulation of rock-types (lithology), pay thickness/porosity, and permeability; inputting geological models into flow simulation; uncertainty assessment. Three lecture hours a week for one semester. Prerequisite: Petroleum and Geosystems Engineering 323K (or 331), 337, and Geological Sciences 416M.

#### **PGE 379. Studies in Petroleum and Geosystems Engineering.**

Special courses or seminars on recent developments in engineering. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Admission to an appropriate major sequence in engineering or consent of instructor.

#### **PGE 679H. Undergraduate Honors Thesis.**

Research performed during two consecutive semesters under the supervision of an engineering faculty member; topics are selected jointly by the student and the faculty member with approval by the director of the Engineering Honors Program. The student makes an oral presentation and writes a thesis. Individual instruction for two semesters. Students pursuing both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering may use this course to fulfill the thesis requirement for the Bachelor of Arts, Plan II. Prerequisite: For 679HA, enrollment in the Engineering Honors Program; for 679HB, Petroleum and Geosystems Engineering 679HA and enrollment in the Engineering Honors Program.

# College of Fine Arts

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Douglas Dempster, PhD, *Dean*  
Kenneth Hale, MFA, *Associate Dean*  
D. Rachel Martin, BFA, *Assistant Dean*  
<http://www.utexas.edu/finearts/>

## General Information

### Mission

The College of Fine Arts was established by the state legislature in 1937; in the decades since then, the college has grown with the University to become a leading center for arts study. Both students and faculty members of the College of Fine Arts have regularly received national and international recognition for their achievements; such recognition indicates the degree of academic and artistic excellence to which the college is dedicated.

The College of Fine Arts strives to prepare students for the practice, study, criticism, and teaching of the arts; to lead in developing the arts through research and the creation of new works; and to provide performances and exhibitions that deepen the understanding of the arts, expand audiences, and develop a better quality of life in the University, community, state, and nation. The college prepares students and audiences for the coming decades by emphasizing cultural diversity and technological advancement and by exploring the interrelationships among all the arts.

### Facilities

The Office of the Dean of the College of Fine Arts is located in the E. William Doty Fine Arts Building, at the corner of 23rd and Trinity streets. General inquiries about the college should be directed to this office. The mailing address is The University of Texas at Austin, Office of the Dean, College of Fine Arts, 2305 Trinity Street D1400, Austin TX 78712.

Within the college are three academic units—the Department of Art and Art History, the Sarah and Ernest Butler School of Music, and the Department of Theatre and Dance. Inquiries about a particular unit should be directed to that unit.

### The Visual Arts Center

The Visual Arts Center (VAC) is a place for the intersection of art education and art innovation, which draws together a uniquely diverse population of students, alumni, faculty, guest artists, and creative voices from around the world. Comprising 25,000 square feet, it is the heart of the Department of Art and Art History at The University of Texas at Austin, providing pivotal exhibition, education, outreach, and research space. Designed by renowned San Antonio architects Lake | Flato, the VAC features state-of-the-art exhibition galleries and community gathering spaces that form the intellectual and emotional center of UT's dynamic arts community.

For more information on the VAC's exhibitions and public programs, please visit <http://www.utvac.org>.

### Texas Performing Arts

Texas Performing Arts, one of the nation's most well-respected University-based arts centers, serves the campus and the Austin

community at large through a diverse schedule of world-class fine arts performances, educational activities, and collaborative campus and community partnerships.

Texas Performing Arts presents an international season of music, theatre, dance, and conversation in multiple venues, as well as the best in touring Broadway and concert attractions. As a university-based arts center, Texas Performing Arts is also committed to serving the academic mission of the College of Fine Arts by supporting the work of students, faculty members, and staff members on the stage and in classrooms, studios, production shops, and administrative offices.

### Computer Facilities

In addition to the computer facilities available to all students at the University, the College of Fine Arts maintains facilities with special hardware and software for its own undergraduate and graduate majors. These include a central computer laboratory and learning resource center located in the Fine Arts Library, computer laboratories and media-enhanced classrooms in each of the three academic units, and extensive wireless Internet coverage throughout the college.

Because of the rapidly growing importance of computers in College of Fine Arts curricula, students are strongly encouraged to come to the University with their own computers. Students should contact the area of academic interest for more information.

### Fine Arts Library

Located in the E. William Doty Fine Arts Building, the Fine Arts Library provides a broad range of services and materials for students in art, theatre, dance, and music, as well as audiovisual materials in other subject areas. Services include information and research assistance, instruction in getting the best from library databases including online and full-text journals, circulation and reserves (for checking out items), and media and technology support. The Fine Arts Library is wireless equipped and offers computing hardware and software to support the study of the fine arts. Students may borrow media equipment, including digital cameras and CD players, and reserve seminar and group study rooms. Lockers and carrels are also available. For more information go to: <http://www.lib.utexas.edu/fal/services.html>.

The art collection includes materials on most art and design movements and schools, photography, and art education. Artists of most periods and nationalities and studies of their work are represented, as are most media and techniques. Art works on display include a large pre-Columbian pottery collection and modern prints. The digital image collection contains over 50,000 images from art, architecture, the performing arts, and fashion, and is accessible, with a UT EID, at <http://dase.laits.utexas.edu>.

The music collection includes materials on performance, composition, history, ethnomusicology, music education, and music therapy. Most historical periods and geographical areas are covered in both classical and popular idioms, and while the emphasis is on the Western classical tradition, many other musics are represented. Tens of thousands of scores are available for both study and performance, and over 50,000 CDs are available for listening, as well as musicals, operas, conducting and master classes on DVD.

The theatre and dance collection includes materials on performance, especially play production, theatrical design, playwriting, theatre education, and dance. Materials on other types of theatrical presentations, such as magic, circuses, and pantomime, are also

included. The Fine Arts Library holds texts of major plays written in English or translated into English, with contemporary plays collected most heavily. The Perry-Castañeda Library also holds texts of plays in English and other languages, with emphasis on plays as a literary form and on literary criticism.

The audiovisual collection includes documentary and feature films, including popular movies, foreign films, Academy Award winners, and film festival winners on DVDs and VHS tapes. Other media formats include 16-mm films, interactive media/CD-ROMs, and slides.

Most materials, including CDs and DVDs, can be checked out by anyone with a valid UT EID.

Special collections include materials from the Austin Theatre Alliance—Paramount and State Theatres, and the Historical Music Recordings Collection, which includes over 200,000 items in older formats such as 78rpm and LP records, and audiocassettes.

## Financial Assistance Available through the College

Students in the College of Fine Arts are eligible for a variety of scholarships and awards. Most scholarship aid in the college is offered through the academic units (art and art history, music, and theatre and dance). For information about scholarship application procedures and deadlines, the student should contact the academic unit of interest.

## Student Services

### Office of the Dean, Student Affairs

In the College of Fine Arts, the Office of the Dean, Student Affairs offers a variety of student services, including general academic advising, maintenance of student records, evaluation of the student's academic standing and progress toward a degree, and information about programs in which students may study abroad. Students should contact the Office of the Dean, Student Affairs for answers to questions about degree requirements or other College of Fine Arts or University policies and regulations. This office is also a good source of general information and referral.

## Academic Advising

Each academic unit in the college (art and art history, music, and theatre and dance) has an undergraduate advising office with a faculty advising coordinator and one full-time staff adviser. Questions about advising policies and procedures should be directed to those offices.

A student enrolled in the College of Fine Arts is required to meet with a designated adviser before registering for any semester or summer session. This meeting must take place during the official advising period, and the student's proposed schedule of classes must be approved by the adviser. Subsequent changes or corrections in the schedule must also have the adviser's approval.

## Career Services

### Career Advising

Fine Arts Career Services, a division of the Office of the Dean, helps fine arts majors explore career options, plan for careers, and develop strategies for seeking jobs upon graduation. More information is available at <http://www.utexas.edu/finearts/careers/>. Career advising and planning services are also available from the Sanger Learning and

Career Center in Jester Center and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies.

The University makes no promise to secure employment for each graduate.

## Education Career Services

Education Career Services provides job placement services in education-related occupations at the elementary school, secondary school, and college level. Candidates for teacher certification should register with Education Career Services at the beginning of their student-teaching semester. Additional information is available on the Education Career Services Web site at <http://www.edb.utexas.edu/education/edServices/career/>.

## Student Organizations

In each of the units of the College of Fine Arts are various student organizations, including honor societies, professional associations, and service organizations. For information about current organizations and their eligibility requirements, contact the appropriate unit.

The Fine Arts Council is the official student organization of the college.

## Study Abroad

The University offers many opportunities for students to study abroad. Among these is the Learning Tuscany program, which offers instruction by University faculty members at the Santa Chiara Study Center in Castiglion Fiorentino, near Florence. More information is available from the undergraduate advising office in the Department of Art and Art History.

Casa Herrera is a research, conference, and teaching facility located in the heart of Antigua, Guatemala, operated by the Department of Art and Art History. As an extension of the department's Mesoamerica Center, Casa Herrera focuses on the varied and inter-related disciplines that contribute to the study of Pre-Columbian art, archeology, history, and culture.

The Butler School of Music offers an opera program in Salzburg, Austria. More information is available from the undergraduate advising office in the Butler School of Music.

Another international opportunity is the Institute for Digital Performing Arts program, which takes place in Costa Rica during the summer. More information is available from the undergraduate advising office in the Department of Theatre and Dance.

Maymester Abroad courses in fine arts are offered for five weeks in May and June. More information is available from the Study Abroad Office at <http://www.utexas.edu/student/abroad/>.

## Admission and Registration

### Admission

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information* (<http://registrar.utexas.edu/catalogs>).



Within the College of Fine Arts, the departmental advising offices and dean's office provide assistance to students who plan to attend the University. For information about a particular academic area, prospective students should consult the advising office in the Department of Art and Art History, the Butler School of Music, or the Department of Theatre and Dance. They should consult the Office of the Dean, Student Affairs for general information and for answers to questions about degree requirements. Because of the variety of degree options available in the college, prospective students are encouraged to visit the campus and meet with an academic adviser or admissions coordinator. An appointment should be arranged in advance.

## Admission Policies of the College

To major in any field in the College of Fine Arts, a student must be admitted to the University. He or she must also meet the following special requirements.

### Department of Art and Art History

To major in the Department of Art and Art History, a student must have the approval of the Art and Art History Admissions Committee. Information about admission requirements, procedures, and deadlines is available from the office of undergraduate studies in the department or online at <http://www.finearts.utexas.edu/aah/>.

Students admitted to the design major must pass annual performance reviews to continue in the major.

### Sarah and Ernest Butler School of Music

To major in music, a student must pass an audition conducted by the Butler School of Music. At the discretion of the school, a student who fails an audition may be allowed to reaudition at a later date. Information about audition requirements, procedures, dates, and deadlines is available from the undergraduate student office in the Butler School or online at <http://www.music.utexas.edu/>.

### Department of Theatre and Dance

Admission to programs in the Department of Theatre and Dance requires the approval of the Theatre and Dance Admissions Committee. Information about admission requirements, procedures, and deadlines is available from the undergraduate advising office in the department or online at <http://www.finearts.utexas.edu/tad/>.

## Transfer

### Internal Transfer

A student may transfer from another division of the University to the College of Fine Arts in accordance with the procedures and policies given in *General Information* (<http://registrar.utexas.edu/catalogs>). However, a student seeking admission to any department of the college must also satisfy the special admission requirements described above.

### External Transfer

A student who begins study in the fine arts at another institution should consult the transfer adviser in the departmental undergraduate advising office (art and art history, music, theatre and dance) before applying to the University.

## Transfer Credit Evaluation

Most credit accepted from another college or university is evaluated by the Office of Admissions to determine equivalent courses at the University of Texas at Austin. For some transferred courses, especially in the fine arts, credit is accepted but no specific University equivalency is assigned. If, for example, a student has completed twelve semester hours of transferable coursework in studio art at another institution, the Office of Admissions may accept the work only as twelve semester hours of unspecified credit in art. The same will often be true for courses in theatre and dance and music.

Unspecified transfer credit outside the student's major is evaluated by the Office of the Dean, Student Affairs during the degree audit process described in the Degree Audit (p. 225) section. For unspecified transfer credit within the student's major, however, the student must seek a transfer evaluation from the designated adviser in art and art history, music, or theatre and dance. The adviser will identify courses in the major that are equivalent to University courses and forward his or her written recommendation to the Office of the Dean, Student Affairs.

Transfer credit in music performance may not be counted toward a degree in music until the student has completed additional music performance coursework at the University.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), published each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

## Approvals Required

Before registering for any semester or summer session, a student in the College of Fine Arts must obtain written approval of the proposed schedule of classes from his or her designated adviser.

## Prerequisites

The student must also meet the prerequisite for each course in which he or she enrolls. Prerequisites are given in the relevant catalog section and often appear in the *Course Schedule*. A student who registers for or adds a class without having met the prerequisite may be dropped from the class.

## Fine Arts Registration Requirements

In addition to individual course prerequisites, there are special registration requirements for certain courses and areas of study in the College of Fine Arts.

### Sarah and Ernest Butler School of Music

1. A student with transferred college credit in music theory must take a diagnostic examination in music theory. The results of the examination determine the level of music theory for which the student is advised to register.

2. Before beginning upper-division coursework in the major instrument, students majoring in music performance (including those pursuing the pedagogy option) must pass a full faculty jury examination in the major instrument and must be admitted to upper-division standing in that instrument.
3. Before beginning upper-division coursework in the major area, a student majoring in composition or music studies must obtain the approval of a designated committee composed of faculty members from that major.
4. Fulfillment of the music performance requirement signifies the attainment of a given level of artistic performance, rather than the completion of a specific number of semester hours of credit. At the discretion of the faculty, a student may be required to repeat any course in music performance; in such a case, the course may be repeated for credit. No music performance requirement is fulfilled unless approval of the faculty has been obtained.
5. A student who receives a grade lower than a C- in any music performance course may not register for that course during the next semester or summer session until the requests of other students for such work have been met.
6. A student whose degree plan requires a piano proficiency of Music 210K must continue with group piano classes in consecutive semesters until the requirement is fulfilled. In exceptional cases, a student with permission from the group piano supervisor may enroll in private instruction Piano 201 until the Music 210K proficiency has been reached. The student may not enroll in private instruction Piano 202 until the Music 210K proficiency has been completed.

## Department of Theatre and Dance

A student must enroll in an appropriate production or performance laboratory course, under the supervision of a Department of Theatre and Dance faculty member, in any semester he or she wishes to participate in a production sponsored by the department. A student majoring in the Department of Theatre and Dance must consult his or her adviser to determine the appropriate course. Nonmajors who wish to enroll in production or performance laboratory courses must consult the undergraduate advising office of the department.

## Academic Policies and Procedures

### Academic Standards

#### Class Attendance and Absences

Regular and punctual attendance is required at all classes, laboratories, practice hours, and other activities for which the student is registered.

Absences from scheduled practice hours, rehearsals, and laboratories will be excused only for serious and substantiated reasons, and the final grade in the course may be lowered for unexcused absence. Absence from a theatre, dance, or music rehearsal, crew meeting, or performance may be deemed sufficient reason for giving the student a grade of *F* for the semester's work in the course concerned.

If an instructor indicates that a student has fallen below a passing grade in a course because of excessive absences, the dean, upon

written recommendation of the instructor, may drop the student from that course and assign a grade of *F* for the semester.

## Special Regulations of the College

### Studio and Design Courses

Students retain copyright to all two-dimensional, three-dimensional, time-based, and electronic artwork created in the Department of Art and Art History; they grant a nonexclusive license to exhibit, display, reproduce, perform, or adapt these works at the discretion of the faculty. Works left in any departmental facility at the end of any semester or summer session may be removed or destroyed at the discretion of the faculty.

### Music Performances

A student majoring in the Butler School of Music must consult his or her faculty adviser before participating in any public performance.

## Honors

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

### Special Honors in Art History

The Honors Program in Art History gives outstanding art history majors an opportunity to undertake an advanced research and writing project under the supervision of a faculty member. The notation "Special Honors in Art History" appears on the transcript of each graduate who completes the program.

### Admission to the Program

The honors program is available to qualified art history majors pursuing the degree of Bachelor of Arts in Art. At the beginning of the senior year, an interested art history major should apply to the honors adviser for admission to the program. The criteria for admission are

1. Completion of at least ninety semester hours of college credit.
2. A University grade point average of at least 3.00.
3. A grade point average of at least 3.50 in all art history courses attempted, both at the University and elsewhere.
4. Completion of at least fifteen semester hours in art history. If the hours in art history were not earned at the University, admission is at the discretion of the honors adviser.
5. Approval of the honors adviser, who is responsible for maintaining the high standards for admission to and completion of the program.

## Graduation with Special Honors in Art History

To complete the program, students must meet the following requirements by the end of the semester in which they graduate.

1. Graduation as an art history major.
2. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree.
3. A University grade point average of at least 3.00.
4. A grade point average of at least 3.50 in all art history courses taken at the University.
5. Completion of Art History 375 with a grade of at least *B*.
6. Approval of the honors adviser.
7. Completion of Art History 379H with a grade of *A*. This conference course, in which the student researches and writes a thesis, may not be counted toward the minimum number of hours of art history required for the degree.

To enroll in Art History 379H, the student must have the consent of the honors adviser. Consent is based on a written prospectus for the student's honors thesis and a letter of support from the art history faculty member who will supervise the thesis. The prospectus and the letter of support must be submitted to the honors adviser by the end of the semester preceding the semester in which the student plans to take Art History 379H.

The student may develop the honors project and prepare the prospectus either in Art History 376 or in another art history course:

- A. With the approval of the honors adviser, the student must complete the independent study course Art History 376 with an art history faculty member who agrees to supervise the student's work. Art History 376 may be counted toward the degree as elective art history credit. The student must earn a grade of at least *B* in order to progress to Art History 379H.
  - B. The student may also base the prospectus on a project undertaken in another art history course in which he or she earned a grade of at least *B*.
8. Submission of a departmental honors degree audit application to the Office of the Dean of the College of Fine Arts. This degree audit application may be submitted when the student is admitted to the honors program; it must be on file when the student applies for graduation. Failure to meet this requirement will preclude graduation with special honors in art history.

## Certificate of Recognition in Music Performance

This certificate is offered to encourage undergraduate music students who are not music performance majors to pursue the intensive study of their instrument beyond the minimum requirements for their degree. The area of performance is indicated on the certificate.

### Eligibility

To apply for a Certificate of Recognition in Music Performance, a student must be enrolled as an undergraduate music major pursuing

the Bachelor of Music degree or the Bachelor of Arts in Music degree. He or she must be enrolled in principal instrument course 260.

### Procedure

A student who meets the eligibility criteria must submit a petition to the appropriate music performance jury for permission to audition before the Butler School of Music faculty—that is, to perform at a full faculty jury examination. This petition may be submitted during any semester in which the student is enrolled in principal instrument course 260. Ordinarily, the student may not audition for the full faculty before the conclusion of his or her second semester of principal instrument course 260. If the petition is approved, the student may audition at a full faculty jury examination.

If the student obtains approval at the full faculty jury examination, then he or she must present a certificate recital during the following academic year. The student may also enroll in Music 420R rather than principal instrument course 260 for the semester in which the certificate recital is to be given. A certificate recital must be equivalent to the junior recital required of a performance major and must offer a repertoire equivalent to that of an upper-division performance major. The recital is heard by the faculty of the student's principal instrument, who vote to approve or disapprove the granting of a Certificate of Recognition in Music Performance. If approval is given by the division faculty, the certificate is issued by the Butler School and signed by both the student's music performance instructor and the director of the school.

## Graduation

### Special Requirements of the College

All students must fulfill the general requirements (p. 18) for graduation. Students in the College of Fine Arts must also fulfill the following requirements.

### Residence

See the University-wide general requirements (p. 18) on coursework to be taken in residence. Unless an exception is approved by the adviser and the dean, a student in the College of Fine Arts must also complete in residence the last eighteen semester hours in the major subject that are counted toward the degree.

### Grade Point Average

All University students must have a grade point average of at least 2.00 to graduate. In addition, a student in one of the following majors must meet special grade point requirements.

### Studio Art

A student majoring in studio art must have a grade point average of at least 2.50 for all upper-division studio art courses taken in residence at the University.

### Design

A student majoring in design must have a grade point average of at least 2.50 for all upper-division design courses taken in residence at the University.

## Art History

A student majoring in art history must have a grade point average of at least 2.50 for all upper-division art history courses taken in residence at the University.

## Bachelor of Arts in Music

A student pursuing the Bachelor of Arts in Music must have a grade point average of at least 2.50 in all upper-division courses in the Butler School of Music (excluding ensemble) taken in residence at the University.

## Bachelor of Arts in Theatre and Dance

A student pursuing the Bachelor of Arts in Theatre and Dance must have a grade point average of at least 2.50 in all upper-division courses undertaken in the Department of Theatre and Dance.

## Teacher Certification in Art, Theatre Arts, Dance, or Music

A student pursuing teacher certification must meet certain grade point average requirements during the course of the certification program. For information, consult the teacher certification officer, College of Education.

## Butler School of Music Special Requirements

### Ensemble Requirement

Ensembles that may be used to fulfill the following requirements are designated by the Butler School. For information, the student should contact the undergraduate advising office of the school. With the approval of the designated adviser, a student may enroll in more than one ensemble in a semester, but no more than one ensemble a semester may be used to fulfill this requirement.

### Bachelor of Music

Students seeking the Bachelor of Music must complete in residence at least eight long-session semesters of approved ensemble. Transfer students must complete an approved ensemble each long-session semester in residence until they have met the ensemble requirement or until they graduate, whichever comes first. A transfer student may count toward this requirement two semesters of transferred ensemble approved by the Butler School.

The ensemble requirement is waived for music studies majors during the student teaching semester.

### Bachelor of Arts in Music

Students seeking this degree must complete in residence at least four long-session semesters of ensemble approved by the Butler School. Transfer students must complete an approved ensemble each long-session semester in residence until they have completed four semesters of ensemble or until they graduate, whichever comes first. A transfer student may count toward this requirement one semester of transferred ensemble approved by the Butler School.

## Recital Requirement for Music Studies Majors

Before the end of his or her last semester of study on the principal instrument, a music studies major must present either the recital required for a Certificate of Recognition in Music Performance (p.

224) or a community performance approved by the music studies faculty and the student's instructor in the principal instrument.

## Degree Audit

At registration periods, each student normally receives an advising audit that summarizes his or her progress toward a degree. An official degree audit, however, is the required statement from the Office of the Dean, Student Affairs of the student's official standing in a College of Fine Arts degree program.

Official degree audits are printed and reviewed by the Office of the Dean, Student Affairs for students with a major in the College of Fine Arts who have completed at least sixty semester hours of coursework. The degree audit is mailed to the student, and the student is advised to retain this official degree audit for his or her records. If a student changes his or her catalog, principle instrument, major, or any degree option that affects the requirements of his or her degree program, a new official degree audit will be printed, reviewed, and mailed to the student.

The official degree audit provides an accurate statement of the requirements, but the student is responsible for meeting all deadlines, knowing the requirements, and registering for courses that fulfill all the requirements for the degree as stated in a catalog under which he or she is entitled to graduate. Before registering, the student should seek an official ruling from the Office of the Dean, Student Affairs if in doubt about any requirement.

## Applying for Graduation

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file a graduation application form with the Office of the Dean, Student Affairs. This should be done at the beginning of the semester in which the student intends to graduate; it must be done by the deadline to apply for an undergraduate degree, which is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

An official degree audit must be on file when the student submits the graduation application. Because the application process includes a review of all remaining degree requirements, candidates for graduation are encouraged to apply as early in the semester as possible. A student who applies for graduation but does not receive the degree must submit a new application in the semester he or she subsequently intends to graduate.

The student must be registered at the University for the semester or summer session in which the degree is to be granted. This requirement may be fulfilled by registering for courses in residence or by registering in absentia. For information about registration in absentia, the student should consult the Office of the Dean, Student Affairs no later than the second week of the semester in which he or she intends to graduate.

Credit received by examination, correspondence, or transfer does not fulfill the residence requirement. Students planning to receive credit by any of these means must consult the Office of the Dean, Student Affairs before the semester in which they intend to graduate for a ruling about whether the credit may be applied toward the degree and for information about the procedures and deadlines involving credit by examination, correspondence, and transfer.



No degree will be conferred unless all requirements have been fulfilled and all deadlines met.

## Teacher Certification

To be recommended for a certificate to teach in Texas public schools, an undergraduate or graduate student must complete a University of Texas at Austin approved program for teacher preparation. The University maintains approved programs for art, theatre arts, dance, and music, and students interested in one of these teaching areas ordinarily pursue the degree program in visual art studies, theatre studies, dance, or music studies. For information about current teacher certification standards and the requirements for admission to the Professional Development Sequence, the student should contact the teacher certification officer in the College of Education, George I. Sánchez Building 216, and the appropriate faculty adviser in art and art history, music, or theatre and dance.

## Degrees and Programs

### Degrees Offered

The College of Fine Arts offers a wide variety of degree programs. For undergraduate students who seek professional training in the arts or who feel the need for intensive training in their chosen art, the college offers the degrees of Bachelor of Fine Arts and Bachelor of Music. These degrees require that approximately two-thirds of the coursework be completed in the major area.

The student who wants a broad education with an emphasis in the arts may pursue the degree of Bachelor of Arts in Art, Bachelor of Arts in Music, or Bachelor of Arts in Theatre and Dance. These degrees require that approximately a third of the coursework be completed in the major area.

### Department of Art and Art History

The Department of Art and Art History offers academic programs in art history, design, studio art, and visual art studies.

The study of art history embraces a wide range of objects: paintings, drawings and prints of all kinds, including photographs and film; sculpture; buildings and their grouping into towns and cities; graves and tombs; gardens; books and manuscripts; objects made of precious stones and metals; performance; in short, all visual and material culture. There is a full range of art history instruction in ancient, medieval, Renaissance, baroque, modern, and contemporary art, as well as in the art from non-Western areas (African, Asian, Islamic, Central and Latin American, Mesoamerican, Native American, and Oceanic).

Design as a complex cultural activity expresses the ideas and values of society while it contributes to the formulation of those ideas and values. Students in design focus on the connection between design and related disciplines, emphasizing the relationships the designer shares with others. Through in-depth investigation of social, cultural, technological, and aesthetic dimensions of design, students have the opportunity to increase their cognitive skills; develop critical analytical, research, and organizational skills; and gain facility with the technologies of design. The goal of the nontraditional design program is to encourage students to use the design process as a

method of understanding their culture and to effectively articulate this understanding to others.

The purpose of the studio art program is to transmit a solid foundation in a wide range of studio practices by providing students with experiences in historical and theoretical models and by providing a vocabulary to understand and engage in art's critical discourse. Studio art instruction is given in ceramics (sculptural objects and contemporary vessels), drawing and painting (contemporary and historical practices), photography (black/white and digital), printmaking (intaglio, lithography, serigraphy), sculpture (casting, hot and cold fabrication, installation), and transmedia (digital-time art, video art, performance art). Through an exploration of the ideas and forms at the leading edge of knowledge, our students develop the capacity for experimentation and invention to create new forms of studio art.

Art educators believe that art is an essential component of all societies and that an education is not complete without knowledge of art's history, purpose, function, and techniques. Visual art studies prepares students to strengthen art education in schools and communities through instruction in art criticism, philosophy, and current trends in art education, with art education history, philosophy, student development, teaching strategies, standards, objectives, and evaluation procedures. Field observations and practical classroom teaching are required of all students in our programs and leads to art teacher certification for early childhood through grade twelve.

The University's extensive resources for art research include the Fine Arts Library, the Blanton Museum of Art, the Perry-Castañeda Library, and specialized collections such as the Harry Ransom Center, the Classics Library, the Architecture and Planning Library, and the Benson Latin American Collection. While at the University, students also have access to the large permanent collection and traveling exhibitions.

Programs of study leading to the following undergraduate degrees are offered in the Department of Art and Art History:

- Bachelor of Arts in Art  
*Art history*  
*Studio art*
- Bachelor of Fine Arts  
*Design*  
*Studio art*  
*Visual art studies*

Students who plan to pursue certification to teach art in Texas public schools should follow the visual art studies program.

### Sarah and Ernest Butler School of Music

Through professional education of the highest caliber, the Butler School of Music prepares students for productive careers as performers, teachers, composers, and scholars, and for satisfying lives as informed and responsible members of a democratic society. In accordance with the University's mission, the School also seeks to extend the boundaries of knowledge and human experience through research and the creation of new music.

Housed in two connected buildings, the physical facilities of the Butler School include performance spaces in the 700-seat Bates Recital Hall with its world-renowned Visser-Rowland pipe organ, Jessen Auditorium, Recital Studio, and MuCullough Theatre. For special events the school collaborates with Texas Performing Arts for performances in Bass Concert Hall. Other facilities include well-

equipped classrooms and faculty studios/offices, multiple large and small rehearsal halls, electronic music studios, recording studios, 130 practice rooms and modules (including dedicated rooms for organ, harp, and percussion), a music computer lab, chamber music rooms, two digital keyboard labs, and 250 well-maintained pianos. Also available to music students are libraries including manuscripts, rare editions, and performance collections; a Medieval and Renaissance instrument collection; a Javanese gamelan, and a Music Learning Laboratory.

Programs of study leading to the following undergraduate degrees are offered in the Butler School of Music:

- Bachelor of Arts in Music  
*Emphasis in Music*  
*Emphasis in Music Business*  
*Emphasis in Recording Technology*
- Bachelor of Music  
*Composition*  
*Jazz composition:* Double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone  
*Jazz performance:* Double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone  
*Music performance:* Voice, piano, organ, harp, harpsichord, and orchestral instruments  
*Music studies:* Students who plan to pursue certification to teach music in Texas public schools should follow the music studies program.

## Department of Theatre and Dance

The Department of Theatre and Dance affords students opportunities for scholarship and practice in all the principal areas of theatre and dance. Students may choose programs of study leading to a variety of academic and professional goals, including teacher certification in both theatre and dance.

The facilities of the department are among the best available to university programs in the United States. In addition to the performance areas, studios, and shops of Texas Performing Arts, the department has the B. Iden Payne Theatre, the Oscar Brockett Theatre (a flexible space black box theatre), a 130-seat laboratory theatre, an extensive costume collection, four dance studios, a drafting studio, a design studio as well as numerous classrooms and rehearsal studios in the F. Loren Winship Drama Building. The Department also has a vital connection to the film and TV studios of the College of Communications, including collaborative courses with the Department of Radio-Television-Film. Of special interest to students pursuing theatre research is the Performing Arts Collection, housed in the Harry Ransom Humanities Research Center, which contains one of the world's most important collections of theatre material.

Programs of study leading to the following undergraduate degrees are offered in the Department of Theatre and Dance:

- Bachelor of Arts in Theatre and Dance
- Bachelor of Fine Arts  
*Dance*  
Students who plan to pursue certification to teach dance in Texas public schools should follow the dance studies option under the dance program.  
*Theatre studies*

Students who plan to pursue certification to teach theatre arts in Texas public schools should follow the theatre studies program.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity courses (PED) are offered by the Department of Kinesiology and Health Education. A limited number of these courses may be counted as electives toward degrees in the College of Fine Arts, but only at the discretion of the dean. All physical activity courses are counted among courses for which the student is enrolled, and the grades are included in the grade point average. For further information, contact the Office of the Dean, Student Affairs.

### Bible Courses

Bible courses may be counted as lower-division electives in College of Fine Arts degree programs that have room for such electives. No more than twelve semester hours of such work may be counted toward any degree offered by the University.

### Courses Taken on the Pass/Fail Basis

Regulations concerning courses taken on the pass/fail basis are given in *General Information* (<http://catalog.utexas.edu/general-information>). For most degree programs in the College of Fine Arts, a very limited and restricted amount of coursework may be taken on the pass/fail basis. To be assured that a course taken on this basis will apply to the degree, the student must consult the Office of the Dean, Student Affairs before enrolling in the course.

### Credit by Examination, Correspondence, and Transfer

Credit that a student in residence earns by examination, correspondence, or extension will not be counted toward a degree in the College of Fine Arts unless specifically approved in advance by the dean.

Credit that the student earns at another institution while enrolled in residence at the University also will not be counted toward a degree in the college unless approved in advance by the dean.

A student planning to take coursework at another institution while not enrolled in residence at the University should also seek a ruling from the Office of the Dean, Student Affairs as to whether the credit may be applied toward a degree and for information about procedures and deadlines. This ruling should be obtained before registering for the coursework.

No more than 10 percent of the semester hours required for any degree offered in the College of Fine Arts may be completed by correspondence.

## Bachelor of Fine Arts

### Core Curriculum

All students must complete the University's core curriculum (p. 22). The specific requirements for the Bachelor of Fine Arts consist of prescribed work, major requirements, and electives. In some cases, a course required for a major in the Bachelor of Fine Arts may also

be counted toward the core curriculum; these courses are identified below.

## Studio Art Major Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*, registrar.utexas.edu/schedules/. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Studio art: Sixty semester hours, consisting of
  - a. Studio Art 303K, 303L, 304K, and 304L
  - b. Twelve semester hours, consisting of three hours from each of the following four areas:
    1. Area A: Drawing, life drawing, painting
    2. Area B: Intaglio, lithography, photography, serigraphy
    3. Area C: Digital-time art, performance art, video art
    4. Area D: Ceramics, metals, sculpture
  - c. Thirty-six additional semester hours of studio art, of which at least twenty-four hours must be upper-division
2. Art history: Twelve semester hours, consisting of
  - a. Art History 302 and 304
  - b. Six semester hours of upper-division coursework in art history, three semester hours of which may also be counted toward the visual and performing arts requirement of the core curriculum

## Electives

Six semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BFA with a major in studio art: 120 semester hours as outlined above.

## Design Major

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Studio art: Twelve semester hours, consisting of Studio Art 303K, 303L, 304K, and 304L.
2. Design: Forty-five semester hours, consisting of
  - a. Design 370 with a grade of at least C and approval of the design faculty
  - b. Design 371 with a grade of at least C and approval of the design faculty
  - c. Thirty-nine additional hours of design, of which at least twenty-four must be upper-division
3. Art history: Twelve semester hours, consisting of
  - a. Art History 302 and 304
  - b. Six semester hours of upper-division coursework in art history, three semester hours of which may also be counted toward the visual and performing arts requirement of the core curriculum

Approval of the design faculty is required before the student may begin upper-division design courses. A student with transfer credit in design must have approval of the design faculty before taking upper-division design courses at the University.

## Electives

Nine semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BFA with a major in design: 120 semester hours as outlined above.

## Visual Art Studies Major

The major in visual art studies is a preprofessional academic program recommended for students seeking teacher certification (early childhood through grade twelve) in art or planning to pursue undergraduate or graduate training for visual art careers in community art programs. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Studio art: Thirty-six semester hours, consisting of
  - a. Studio Art 303K, 303L, 304K, and 304L
  - b. Twelve semester hours, consisting of three hours from each of the following four areas:

1. Area A: Drawing, life drawing, painting
  2. Area B: Intaglio, lithography, photography, serigraphy
  3. Area C: Digital-time art, performance art, video art
  4. Area D: Ceramics, metals, sculpture
- c. Twelve additional semester hours of coursework in studio art, all of which must be upper-division
2. Art history: Twelve semester hours, consisting of
    - a. Art History 302 and 304
    - b. Six semester hours of upper-division coursework in art history, three semester hours of which may also be counted toward the visual and performing arts requirement of the core curriculum
  3. Visual art studies: Twelve semester hours of coursework in visual art studies

## Minor

Twelve semester hours approved by the visual art studies adviser.

## Approved Electives

Six semester hours of coursework approved by the visual art studies adviser. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BFA with a major in visual art studies: 120 semester hours as outlined above.

## Theatre Studies Major

The major in theatre studies is a preprofessional academic program recommended for students seeking teacher certification in theatre arts. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

## Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Theatre and dance core: Eighteen semester hours, consisting of Theatre and Dance 311, 313C, 314C, 314P, 317C, and 317D
2. Theatre studies emphasis: At least thirty-three semester hours, consisting of
  - a. Acting and directing: Theatre and Dance 313D, 323C, and 323D

- b. Design and technical production: Theatre and Dance 314M; and nine semester hours chosen from topics of Theatre and Dance 354T, including one course in each of the following three areas: costume, lighting, and scenery
  - c. Theatre studies: Theatre and Dance 326C, 326D, and 326E
  - d. Theatre and Dance 351T (Topic: *Creative Drama II*)
3. Nine additional semester hours of coursework in theatre and dance, of which at least six hours must be upper-division, with no more than three hours in production courses

## Approved Electives

Eighteen semester hours of coursework approved by the theatre studies adviser. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BFA with a major in theatre studies: 120 semester hours as outlined above.

## Dance Major

The option in Dance Studies is a preprofessional academic program recommended for students seeking teacher certification in dance. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

## Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Theatre and dance core: Fifteen semester hours, consisting of Theatre and Dance 311, 312M, 314P, 317M, and 317N
2. Dance technique:
  - a. Contemporary dance technique: Twelve semester hours, consisting of two semesters of Theatre and Dance 312C and two semesters of 312D
  - b. Ballet technique: Twelve semester hours, consisting of two semesters of Theatre and Dance 312F and two semesters of 312G
3. Movement composition: Theatre and Dance 312N
4. Dance performance and repertory: Two semesters of Theatre and Dance 222P
5. Somatics/anatomy: Four semester hours, consisting of Theatre and Dance 112 and 352
6. Dance emphasis: Eleven semester hours, consisting of Theatre and Dance 332M, 332N, 332P, and 332R
7. Option in either Dance or Dance Studies:



- a. For Option in Dance: Twenty-two semester hours, consisting of two semesters of Theatre and Dance 322E, two semesters of 322J, and ten semester hours chosen from 212P, 112T, 212T, 312T, 232Q, 332S, 152T, 252T, and 352T
- b. For Option in Dance Studies: Twenty-one semester hours, consisting of three semesters of Theatre and Dance 352T and twelve hours of approved electives

3. Diction: Music 111E, 311F, 311G, and 311J
4. Music pedagogy: Music 460PA
5. Music ensemble: Two semesters of Ensemble 103P and at least eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

## Electives

Two semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in voice performance: 120 semester hours as outlined above.

## Piano Performance Major

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

### Major Requirements

1. Performance: With the recommendation of the faculty, given in advance, students may choose either of the following two options.
  - A. Normally suggested for students who wish to emphasize performance: Thirty-two semester hours, consisting of four semesters of Piano 312, two semesters of Piano 362, Music 420R, Music 460P, Music 460R, and Music 222J or 223J
  - B. Normally suggested for students who wish to emphasize pedagogy: Thirty-two semester hours, consisting of four semesters of Piano 312, two semesters of Piano 260, Piano 362, Music 460P, Music 460R, Music 366P, and Music 222J or 223J
2. Music literature and music theory: Music 605, 411, 612, 313M, 313N, 321J, 325M, and 330L; two semesters of Music 259N; and three hours chosen from Music 334, 337, 342, 343J, and 379K
3. Music ensemble: Eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

## Electives

Three semester hours to be chosen from courses either within or outside the Butler School of Music. Additional elective coursework may

To fulfill the degree requirements in dance technique, the student must achieve a suitable level of proficiency and obtain the approval of the dance faculty. At the discretion of the dance faculty, a student may be required to repeat specific dance technique courses in addition to those required for the degree. The student must be registered for dance technique each long-session semester in residence. To continue in this degree program, the student must pass an annual evaluation by the dance faculty. Students whose progress in dance technique is judged unsatisfactory by the faculty will be dismissed from the program.

## Electives

Elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Requirements

For the BFA with a major in dance: at least 124 or 125 semester hours as outlined above.

# Bachelor of Music

## Core Curriculum

All students must complete the University's core curriculum (p. 22). The specific requirements for the Bachelor of Music consist of prescribed work, major requirements, and electives. In some cases, a course required for a major in the Bachelor of Music may also be counted toward the core curriculum; these courses are identified below.

## Voice Performance Major

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may also be used to fulfill other degree requirements.

### Major Requirements

1. Performance: Twenty-six semester hours, consisting of four semesters of Voice 210, two semesters of Voice 362, Music 420R, Music 460R, Music 210K and approval of the faculty, and Music 223J
2. Music literature and music theory: Music 605, 411, 612, 313M, 313N, 321J, 330L, and three hours chosen from Music 334, 337, 342, 343J, and 379K

be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in piano performance: 120 semester hours as outlined above.

## Organ or Harpsichord Performance Major

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

### Major Requirements

1. Performance: Twenty-eight semester hours, consisting of four semesters of major instrument course 312, two semesters of major instrument course 362, Music 420R, Music 460R, and Music 222J or 223J
2. Music literature and music theory: Music 605, 411, 612, 313M, 313N, 321J, 325L, 325M, 330L, and three semester hours chosen from Music 334, 337, 342, 343J, and 379K
3. Music ensemble: Two semesters of Music 259N and eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

### Electives

Four semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

### Total Minimum Requirements

For the BMusic with a major in organ or harpsichord performance: 120 semester hours as outlined above.

## Harp Performance Major

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

### Major Requirements

1. Performance: Twenty-eight semester hours, consisting of four semesters of Harp 312, two semesters of Harp 362, Music 420R, Music 460R, and Music 222J

2. Music literature and music theory: Music 605, 411, 612, 313M, 313N, 321J, and 330L; three semester hours chosen from Music 334, 337, 342, 343J, and 379K; and two courses chosen from the following: Music 214C, 325L, 325M, 226J, and 226K
3. Music ensemble: Two semesters of Music 259N and eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

### Electives

Four to six semester hours to be chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

### Total Minimum Requirements

For the BMusic with a major in harp performance: 120 semester hours as outlined above.

## Orchestral Instrument Performance Major

This program is offered in the following instruments: violin, viola, violoncello, double bass, flute, oboe, clarinet, bassoon, saxophone, trumpet, French horn, euphonium, trombone, tuba, percussion, and guitar.

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

### Major Requirements

1. Performance:
  - A. Thirty semester hours, consisting of four semesters of major instrument course 312, two semesters of major instrument course 362, Music 420R, Music 460R, Music 222J, and Music 210K and approval of the faculty
  - B. For violin majors, proficiency in viola equivalent to Viola 201 and approval of the faculty
  - C. For euphonium majors, proficiency in trombone equivalent to Trombone 201 and approval of the faculty
2. Music literature and music theory:
  - A. Music 605, 411, 612, 313M, 313N, 321J, 226J, and 330L
  - B. Two semesters of either Music 259N or 259P
  - C. One of the following options, chosen with the consent of the undergraduate adviser:

- i Two additional semesters of Music 259N or 259P
- ii One semester of Music 334, 342, or 379K

D. Music 334, 337, 342, 343J, or 379K

3. Music ensemble: Eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

## Electives

Two or three semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in orchestral instrument performance: 120 semester hours as outlined above.

## Jazz Performance Major

This program is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone.

## Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Performance:
  - A. Piano majors: Twenty-four semester hours, consisting of three semesters of Piano 212, two semesters of Piano 212J and approval of the faculty, two semesters of Piano 362J, and Music 420J and 460J
  - B. Drum set majors: Twenty-four semester hours, consisting of two semesters of Percussion 212, two semesters of Drum Set 212J and approval of the faculty, two semesters of Drum Set 362J, Music 210J and approval of the faculty, and Music 420J and 460J
  - C. Majors in other instruments: Twenty-four semester hours, consisting of two semesters of major instrument course 212, two semesters of major instrument course 212J and approval of the faculty, two semesters of major instrument course 362J, Music 420J and 460J, and Music 210J and approval of the faculty
2. Music literature and music theory: Music 605, 411, 612, 313M, 313N, 321J, 325L, 325M, 226J, 226K, 330L, 164L, and three semester hours chosen from Music 334, 337, 342, 343J, and 379K;

3. Music ensemble: Eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement.

## Electives

Two to four semester hours chosen from courses either within or outside the Butler School of Music. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in jazz performance: 120 semester hours as outlined above.

## Composition Major

### Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Performance: At least fourteen semester hours, consisting of four semesters of principal instrument course 210, two semesters of principal instrument course 260 and approval of the faculty, and Music 222J or 223J. Proficiency in Piano 202, second semester, and approval of the faculty are required if the principal instrument is not piano.
2. Music literature and music theory: Music 605, 411, 612, 313M, 313N, 321J, 325L, 325M, 226J, 226K, 330L, 164L, and three semester hours chosen from Music 334, 337, 342, 343J, and 379K.
3. Composition: Music 214C, two semesters of 224G, at least two semesters of 224J and approval of the music theory and composition faculty, 329E, and 329G. Fulfillment of this requirement signifies the completion of original compositions of a quality and a quantity sufficient to present the composition recital described below. At the discretion of the music theory and composition faculty, a student may be required to complete more than two semesters of Music 224J.
4. Recital: Music 160C. Upon approval of the music theory and composition faculty, a composition major must present a recital of his or her works. The recital must be approximately thirty minutes in length and must consist of works approved by the student's composition instructor. It is normally given during the student's last semester of Music 224J. It is graded by a jury of designated music theory and composition faculty members. The student must receive from the jury an average grade of at least *B-* for the recital; if the average grade is less than *B-*, the student, upon approval of the music theory and composition faculty, must present another composition recital.

5. Music ensemble: Eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225).

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

## Electives

Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in composition: 120 semester hours as outlined above.

## Jazz Composition Major

This program is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone.

## Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Performance:
  - A. Piano principals: Seventeen semester hours, consisting of three semesters of Piano 210, two semesters of Piano 212J and approval of the faculty, one semester of Piano 362J, and Music 420J
  - B. Principals in other instruments: Seventeen semester hours, consisting of two semesters of principal instrument course 210, two semesters of principal instrument course 212J and approval of the faculty, one semester of principal instrument course 362J, Music 420J, and Music 210J and approval of the faculty
2. Music literature, music theory, and composition: Music 605, 411, 612, 313M, 313N, 214C, 316M, 321J, 226J, 228G, 228J, 228L, 328M, 330L, 343J, and three semesters of 228P; and Music 228K for principals in instruments other than piano
3. Music ensemble: Eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement.

## Electives

One or three semester hours chosen from courses either within or outside the Butler School. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in jazz composition: 120 semester hours as outlined above.

## Music Studies Major

The major in music studies is a preprofessional academic program recommended for students seeking teacher certification in music or intending to pursue graduate preparation for careers in areas such as music and human learning, music therapy, music management, music merchandising, music publishing, and community music development. Students seeking teacher certification must adhere to current state requirements in addition to the degree requirements described in this catalog. Students should contact the College of Education for current state certification requirements.

## Prescribed Work

In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.

## Major Requirements

1. Performance: Twelve to fourteen semester hours, consisting of four semesters of principal instrument course 210; two semesters of principal instrument course 260 and approval of the faculty; and Music 210K, or equivalent proficiency, and approval of the faculty. Music 210K or equivalent proficiency is required of all music studies majors, regardless of principal instrument. In addition to these requirements, the student must make a recital appearance as described in Butler School of Music Special Requirements (p. 225).
2. Music theory and literature: Music 605, 411, 612, 313M, 313N, and 330L; two semester hours chosen from Music 226G, 226J, and 226N; and Music 321J, 334, 337, 342, 343J, or 379K. The choice of upper-division music literature course must be approved by the student's adviser.
3. Conducting: Four semester hours, consisting of either Music 222J and 222K or Music 223J and 223K.
4. Choral or instrumental music techniques, literature, and performance practices: Seventeen semester hours in one of the following areas of emphasis.
  - A. Choral music emphasis:
    - i Music 354C, 354F, 255V, and 356G.
    - ii Music 354D or three semester hours approved by the music studies adviser.
    - iii Two semester hours chosen from Music 255D (strings), 255E (brasses), and 255F (woodwinds).
    - iv One semester hour chosen from Music 115D (violin), 115E (trumpet), 115F (clarinet), 115G, and 155C. The course used to fulfill this requirement must involve the study of a family of instruments different from that used to fulfill the preceding requirement.



- B. Instrumental music emphasis: Music 354C or 354F; Music 155C, 255D, 255E, 255F, and 356J; and, with the approval of the music studies adviser, four semester hours chosen from Music 115D, 115E, 115F, and 255M.

- 5. Music ensemble: Eight semester hours of music ensemble courses as explained in Butler School of Music Special Requirements. (p. 225)

When taken in residence, Music 313M may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

## Approved Electives

Eight to ten semester hours of coursework approved by the music studies adviser. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BMusic with a major in music studies: 120 semester hours as outlined above.

# Bachelor of Arts in Art

## Core Curriculum

All students must complete the University's core curriculum (p. 22). The specific requirements for the Bachelor of Arts in Art consist of prescribed work, major requirements, and electives. In some cases, a course required for a major in the Bachelor of Arts in Art may also be counted toward the core curriculum; these courses are identified below.

## Studio Art Major

### Prescribed Work

1. In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may also be used to fulfill other degree requirements.
2. Foreign language: Six semester hours beyond course 507, 508K, or the equivalent in one foreign language.
3. Social and behavioral sciences: Six semester hours chosen from the following areas: anthropology, economics, geography, government, history, linguistics, psychology, and sociology. A course counted toward this requirement may not also be counted toward any core curriculum requirement.
4. General culture: Three semester hours chosen from the following areas: architecture, classics (including classical civilization, Greek, Latin), comparative literature, humanities, philosophy, and interdisciplinary fields outside the Department of Art and Art History such as American studies, African and African diaspora studies, Asian studies, Latin American studies, Mexican American studies, and women's and gender studies. The student is encouraged to choose coursework of a multicultural

nature. Courses outside the Department of Art and Art History that are crosslisted with courses in the department may not be used to fulfill this requirement. A course used to fulfill this requirement may not also be counted toward any core curriculum requirement.

- 5. Science, technology, and mathematics: Six semester hours of coursework. Courses must be chosen from computer science, mathematics, and the fields of study included in the science and technology, part I, requirement of the core curriculum. A course counted toward this requirement may not also be counted toward any core curriculum requirement.

## Major Requirements

1. Studio art: Thirty semester hours, consisting of Studio Art 303K, 303L, 304K, 304L, and eighteen additional semester hours of studio art, of which at least twelve hours must be upper-division.
2. Art history: Twelve semester hours, consisting of Art History 302, 304, and six hours of upper-division coursework in art history. Three semester hours of this coursework may also be counted toward the visual and performing arts requirement of the core curriculum.

## Electives

Fifteen semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BAArt with a major in studio art: 120 semester hours as outlined above.

## Art History Major

### Prescribed Work

1. In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*. They may also be used to fulfill other degree requirements.
2. Foreign language: Fifteen to nineteen semester hours, consisting of
  - A. Nine semester hours beyond course 507, 508K, or the equivalent in one foreign language
  - B. One of the following:
    - i Six additional hours of upper-division coursework in the foreign language used to fulfill requirement 2a
    - ii Up to ten semester hours, consisting of course 506 and either 507 or 508K, or the equivalent, in a second foreign language
3. Social and behavioral sciences: Six semester hours chosen from the following areas: anthropology, economics, geography, government, history, linguistics, psychology, and sociology. A course counted toward this requirement may not also be counted toward any core curriculum requirement.

4. General culture: Three semester hours in one of the following areas:
- A. Architecture
  - B. Classics, including classical civilization, Greek, Latin (but excluding any courses in Greek or Latin that are used to fulfill the language requirement)
  - C. Music
  - D. Philosophy
  - E. Radio-television-film
  - F. Theatre and dance
  - G. Programs of special concentration, such as women's and gender studies and Latin American studies

A course used to fulfill requirement 4 may not also be counted toward any core curriculum requirement.

## Major Requirements

1. Studio Art 303K
2. Art history: Thirty semester hours, consisting of
  - A. Art History 302 and 304
  - B. Twelve semester hours of upper-division art history, consisting of three hours in each of the following four areas:
    - i Ancient
    - ii Medieval/Early Modern
    - iii Modern
    - iv Non-Western: African, Asian, Islamic, Latin American, Mesoamerican, Native American, Oceanic
  - C. Art History 375
  - D. Nine additional semester hours of art history

Three semester hours of the coursework counted toward requirement 2 may also be used to fulfill the visual and performing arts requirement of the core curriculum.

## Electives

Seventeen to twenty-one semester hours chosen from courses either within or outside the Department of Art and Art History. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the BAArt with a major in art history: 120 semester hours as outlined above.

# Bachelor of Arts in Theatre and Dance

## Core Curriculum

All students must complete the University's core curriculum (p. 22). The specific requirements for the Bachelor of Arts in Theatre and Dance consist of prescribed work and major requirements. In some cases, a course required for the Bachelor of Arts in Theatre and Dance

may also be counted toward the core curriculum (p. 22); these courses are identified below.

## Prescribed Work

1. In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*, registrar.utexas.edu/schedules/. They may also be used to fulfill other degree requirements.
2. Foreign language: Six semester hours beyond course 507, 508K, or the equivalent in one foreign language.
3. General culture: Three semester hours chosen from the following areas: architecture, classics (including classical civilization, Greek, Latin), comparative literature, humanities, philosophy, and interdisciplinary fields outside the Department of Theatre and Dance such as American studies, African and African diaspora studies, Asian studies, Latin American studies, Mexican American studies, and women's and gender studies. The student is encouraged to choose coursework of a multicultural nature. Courses outside the Department of Theatre and Dance that are crosslisted with theatre and dance courses may not be used to fulfill this requirement. A course used to fulfill this requirement may not also be counted toward any core curriculum requirement.

## Major Requirements

1. Theatre and dance core: Twenty-seven semester hours, consisting of the following courses: Theatre and Dance 311; three semester hours chosen from 302T, 306, 313C, 152T, 252T, and 352T; three semester hours chosen from 312M, 323C, and 323C; 314M; 314P; either 317C and 317D or 317M and 317N; and two semesters of 324P. Theatre and Dance 302T may also be used to fulfill the visual and performing arts requirement of the core curriculum.
2. Additional courses in theatre and dance: Twenty-one semester hours of coursework in the Department of Theatre and Dance, of which at least fifteen must be in upper-division courses.
3. Approved concentration and electives: At least six semester hours of coursework in the approved concentration and electives must be upper-division, and at least nine semester hours must be from outside the Department of Theatre and Dance.
  - A. Approved concentration: Twelve semester hours in a concentration of courses within or outside the Department of Theatre and Dance approved by the student's designated adviser.
  - B. Electives: Nine semester hours of coursework within or outside the Department of Theatre and Dance. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

Students considering graduate study should consult their advisers about the most appropriate choice of courses.

## Total Minimum Requirements

For the Bachelor of Arts in Theatre and Dance: 120 semester hours as outlined above.

## Bachelor of Arts in Music

### Core Curriculum

All students must complete the University's core curriculum (p. 22). The specific requirements for the Bachelor of Arts in Music consist of prescribed work, major requirements, minor, and electives. In some cases, a course required for the Bachelor of Arts in Music may also be counted toward the core curriculum; these courses are identified below.

### Prescribed Work

1. In the process of fulfilling degree requirements, students must complete two courses with a writing flag, one course with a quantitative reasoning flag, one course with a global cultures flag, one course with a cultural diversity flag, and one course with an independent inquiry flag. Courses that fulfill flag requirements are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may also be used to fulfill other degree requirements.
2. Foreign language: Six semester hours beyond course 507, 508K, or the equivalent in one foreign language.
3. General culture: Three semester hours chosen from the following areas: architecture, classics (including classical civilization, Greek, Latin), comparative literature, humanities, philosophy, and interdisciplinary fields outside the Butler School of Music such as American studies, African and African diaspora studies, Asian studies, Latin American studies, Mexican American studies, and women's and gender studies. The student is encouraged to choose coursework of a multicultural nature. Courses outside the Butler School of Music that are crosslisted with music courses may not be used to fulfill this requirement. A course used to fulfill this requirement may not also be counted toward any core curriculum requirement.

### Major Requirements

1. Performance: At least twelve semester hours, consisting of four semesters of principal instrument course 210 and approval of the faculty; four semester hours of music ensemble courses as explained in Butler School of Music Special Requirements (p. 225); and Music 201N (completed to the satisfaction of faculty) for students whose principal instrument is not piano
2. Music: Music 605, 411, 612, 313M, 313N, and 330L
3. Emphasis in Music, Music Business, or Recording Technology:
  - A. For Emphasis in Music: Fifteen semester hours in a concentration of music courses approved by the coordinator of the Bachelor of Arts in Music program, at least eleven hours of which must be upper-division, and including at least three hours chosen from Music 334, 337, 342, 343J, or 379K
  - B. For Emphasis in Music Business: Three semester hours in addition to the requirements of the core curriculum chosen from Communication Studies 306M, 310K, 331K,

355K, 359, 365K, or any course with a writing flag; fifteen additional semester hours in a concentration consisting of Music Business 339M, 339N, 347M, 347N, and 377P

- C. For Emphasis in Recording Technology: Mathematics 408D; either Physics 303K and 303L or 317K and 317L (physics courses that also fulfill part I of the natural science requirement of the core curriculum); fifteen additional semester hours in a concentration consisting of Music Recording Technology 316M, 316N, 335M, 335N or 336C or 345, and 377P

When taken in residence, Music 313M (in requirement 2) may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement. Music 334 (in requirement 3a) may also be used to fulfill the visual and performing arts requirement of the core curriculum.

### Minor

The minor must be approved by the coordinator of the Bachelor of Arts in Music program and must include at least six hours of upper-division coursework.

1. For Emphasis in Music: Twelve semester hours of coursework outside the Butler School of Music
2. For Emphasis in Music Business and Emphasis in Recording Technology: Twelve semester hours of coursework outside the Butler School of Music chosen from one of the following three areas:
  - A. Business Foundations (p. 51) courses as specified by the McCombs School of Business
  - B. Courses within the Bridging Disciplines Programs
  - C. Other topics determined in consultation with the coordinator of the Bachelor of Arts in Music program

### Electives

1. For Emphasis in Music: Six to eight semester hours of electives. At least six hours must be from outside the Butler School of Music, and three of these six hours must be upper-division. Courses that are crosslisted with music courses may not be counted toward this requirement. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.
2. For Emphasis in Music Business: Three to five semester hours of electives. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.
3. For Emphasis in Recording Technology: Two to four semester hours of electives. Additional elective coursework may be needed to provide the total number of semester hours required for the degree.

## Total Minimum Requirements

For the Bachelor of Arts in Music: 120 semester hours as outlined above.

## Advancement to Upper-Division Standing

To advance to upper-division standing in the program, the student must meet the following requirements:

1. Upper-division standing at the University
2. A grade point average of at least 2.50 for all coursework taken in residence at the University
3. Completion of the following courses or their equivalents with a grade point average of at least 2.50: Music 201N (required only for students whose principal instrument is not piano), 605A, 605B, 411A, 411B, 612A, 612B, 313M, and 313N
4. Approval of the coordinator of the Bachelor of Arts in Music program

When taken in residence, Music 313M (in requirement 3) may also be counted toward the three-semester-hour writing flag portion of the core curriculum English composition requirement.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Fine Arts

### Fine Arts: F A

#### Lower-Division Courses

##### F A 301C. Freshman Seminar.

Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.

##### F A 102D, 202D, 302D. Connecting Internship Experience.

Supervised internship experience related to interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 102D, three hours of fieldwork a week for one semester; for 202D, six hours of fieldwork a week for one semester; for 302D, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines Programs research

coordinator, may be repeated once for credit. Prerequisite: Admission to the Bridging Disciplines Programs.

##### F A 110, 210, 310. Topics in the Fine Arts.

Interdisciplinary studies within the fine arts or including the fine arts and other areas. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary.

##### F A 118C, 218C, 318C. Forum Seminar Series.

Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

##### F A 119, 219, 319, 419, 519, 619. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Fine Arts 119, 219, 319, 419, 519, 619 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

##### F A 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Fine Arts.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the College of Fine Arts. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### F A 320. Exploring the Fine Arts.

Open to all University students except those in the College of Fine Arts. An interdisciplinary introduction to the fine arts: their basic concepts, meaning, aesthetics, and role in society. Three lecture hours a week for one semester, with field trips as required. May not be counted toward a degree in the College of Fine Arts. Prerequisite: Upper-division standing or consent of instructor.

### F A 129, 229, 329, 429, 529, 629. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Fine Arts 129, 229, 329, 429, 529, 629 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.



**F A 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Fine Arts.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the College of Fine Arts. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**F A 140, 240, 340. Fine Arts Internship.**

Restricted to fine arts students. At least ten internship hours a week, and, for each semester hour of credit earned, at least one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, a University grade point average of at least 2.50, and consent of instructor.

**F A 150, 250, 350. Special Topics in the Fine Arts.**

Special interdisciplinary studies within the fine arts or including the fine arts and other areas. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary.

**F A 160, 260, 360. Advanced Topics in the Fine Arts.**

Advanced interdisciplinary studies within the fine arts or including the fine arts and other areas. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing or consent of instructor.

**F A 175, 375, 675. Independent Studies: Art, Drama, or Music.**

Independent study or research within the fine arts or between the fine arts and other disciplines. Individual instruction. May be repeated for credit. Prerequisite: Upper-division standing, a grade point average of at least 3.00, consent of instructor, and consent of the dean of the College of Fine Arts.

## Department of Art and Art History

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### Art History: ARH

#### Lower-Division Courses

**ARH 301 (TCCN: ARTS 1301). Introduction to the Visual Arts.**

The visual elements, their nature, functions, and relationships in painting, sculpture, and architecture. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

**ARH 302 (TCCN: ARTS 1303). Survey of Ancient through Medieval Art.**

A study of the major monuments of architecture, sculpture, painting, and metalwork from the ancient period through the end of the Middle Ages. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

**ARH 303 (TCCN: ARTS 1304). Survey of Renaissance through Modern Art.**

A study of the major monuments of architecture, sculpture, painting, and metalwork from the Renaissance to the present. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

**ARH 304. Issues in Visual Culture.**

Aspects of visual culture during the period when art history became an academic discipline in the West (nineteenth and twentieth centuries). The ways in which art has been studied as well as produced. The cultural significance of visual traditions. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: A major in the Department of Art and Art History.

**ARH 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Art History.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### Upper-Division Courses

**ARH 325. Survey of Ancient Near Eastern Art.**

The art of Mesopotamia, Anatolia, Syria, and Persia to the Islamic period. Three lecture hours a week for one semester. Art History 325 and Middle Eastern Studies 320 (Topic 4: Survey of Ancient Near Eastern Art) may not both be counted.

**ARH 327J. Greek Architecture.**

Architecture of mainland Greece, Asia Minor, and Magna Graecia from the Dark Ages to the end of the Hellenistic period, ca. 1000 to 30 BC. Three lecture hours a week for one semester.

**ARH 327L. Ancient Greek Art.**

The art of the ancient Greek world from the Bronze Age through the Hellenistic period. Discussion of the significance of the art in its original context. Three lecture hours a week for one semester.

**ARH 327M. Hellenistic Art and Architecture.**

Art of the Hellenistic period, from the reign of Alexander the Great to the beginning of the Roman Empire, ca. 336 to 31 BC. Three lecture hours a week for one semester.

**ARH 327N. Roman Imperial Art.**

Same as Classical Civilization 340 (Topic 2: Roman Art). Public art of the Roman Empire from Augustus to late antiquity, ca. 31 BC to AD 350. Three lecture hours a week for one semester.

**ARH 327P. Roman Architecture.**

Republican and imperial Roman architecture. Three lecture hours a week for one semester.

**ARH 327R. Art in the Lives of Ordinary Romans.**

Art and architecture from the archaeological sites of Pompeii, Herculaneum, and Ostia as indices of Roman culture, 100 BC to AD 250. Three lecture hours a week for one semester.

**ARH 329J. Byzantine Art.**

Same as Religious Studies 357 (Topic 2: Byzantine Art). Examination of early Christian and medieval art and architecture in the eastern Roman empire, including related traditions (Coptic, Armenian, Georgian, Crusader, Norman). Three lecture hours a week for one semester.

**ARH 329K. Early Medieval Art.**

Architecture, sculpture, painting, and metalwork in western Europe from the third to the eleventh century. Three lecture hours a week for one semester.

**ARH 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Art History.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**ARH 329R. Romanesque Art and Architecture.**

Form and function of religious art in twelfth-century Europe. Three lecture hours a week for one semester.

**ARH 330G. Art at Court: The Gothic Period.**

Changing manifestations of Gothic art and architecture at selected court centers, 1140 to 1400. Three lecture hours a week for one semester.

**ARH 331K. Early Italian Renaissance Art.**

Florentine and central Italian painting, sculpture, and architecture of the fifteenth century. Three lecture hours a week for one semester.

**ARH 331L. High Renaissance Art.**

Major works of art and architecture in Florence, Rome, and Venice in the early sixteenth century. Three lecture hours a week for one semester.

**ARH 331M. Mannerist and Early Baroque Art.**

The art of western Europe from about 1520 to 1590. Emphasis on art in Italy, but developments in the northern countries are also considered. Three lecture hours a week for one semester.

**ARH 332K. Northern Renaissance Art, 1350-1500.**

Northern European art from the International Style to van Eyck and Hieronymus Bosch. Three lecture hours a week for one semester.

**ARH 332L. Northern Renaissance Art, 1500-1600.**

Art and cultural development in the sixteenth century; artists include Durer, Gruenewald, Holbein, and Brueghel. Three lecture hours a week for one semester.

**ARH 333K. Italian Baroque Art.**

The art of Italy in the seventeenth and eighteenth centuries; includes the sixteenth-century sources from which Roman baroque developed. Three lecture hours a week for one semester.

**ARH 333L. The Age of Rembrandt and Rubens: Northern Baroque Art.**

Northern European art in the seventeenth century, stressing the Netherlands and Flanders. Three lecture hours a week for one semester.

**ARH 334. Eighteenth-Century European Art.**

European painting, sculpture, and architecture as social and political events from the age of absolutism to the French Revolution. Three lecture hours a week for one semester.

**ARH 335N. European Art, 1789-1848.**

European painting and sculpture as social and political events from the French Revolution to the revolutionary crises of midcentury. Three lecture hours a week for one semester.

**ARH 335P. European Art, 1848-1900.**

European painting and sculpture as social and political events from the revolutions of 1848 to the turn of the century. Three lecture hours a week for one semester.

**ARH 337K. Twentieth-Century European Art to 1940.**

Major movements in the development of modern European painting and sculpture. Three lecture hours a week for one semester.

**ARH 338L. Art since 1930: Modernism and Mass Modernity.**

Avant-garde activity, primarily painting, photography, and film, in the United States and Europe from 1930 to 1970. Three lecture hours a week for one semester.

**ARH 338M. Art and Culture: 1968 and After.**

Artistic and critical activity in the United States and Europe from 1968 to the present. Three lecture hours a week for one semester.

**ARH 339J. American Art: Colonial Era to the Civil War.**

Painting, sculpture, architecture, and decorative arts from 1665 to 1860. Three lecture hours a week for one semester.

**ARH 339K. American Art: Civil War to the Armory Show.**

Painting, sculpture, architecture, and decorative arts from 1860 to 1920. Three lecture hours a week for one semester.

**ARH 339L. Twentieth-Century American Art to the 1950s.**

Art in the United States from the Armory Show through abstract expressionism. Three lecture hours a week for one semester.

**ARH 339M. American Art since 1960.**

Survey of major movements from 1958 to 1985, from pop art to graffiti art and new expressionism. Three lecture hours a week for one semester.

**ARH 341K. Modern Art of Mexico.**

Same as Latin American Studies 327 (Topic 2: Modern Art of Mexico). Art of the nineteenth and twentieth centuries, particularly muralism and its sources, surrealism, and later movements. Three lecture hours a week for one semester.

**ARH 341L. Modern Latin American Art.**

Same as Latin American Studies 327 (Topic 1: Modern Latin American Art). Development and sources of twentieth-century art in the Caribbean and Central and South America. Three lecture hours a week for one semester.

**ARH 346. Traditional Arts of Africa and Oceania.**

Art in Australia, Melanesia, Polynesia, and sub-Saharan Africa from earliest times to the present. Three lecture hours a week for one semester.

**ARH 347K. Art and Archaeology of Ancient Peru.**

Same as Latin American Studies 327 (Topic 6: Art and Archaeology of Ancient Peru). The growth of civilization in South America from the earliest decorated textiles, pottery, and ceremonial buildings to the imperial Inca style. Three lecture hours a week for one semester.

**ARH 347L. Mesoamerican Art.**

Same as Latin American Studies 327 (Topic 3: Mesoamerican Art). Mesoamerican art and architectural styles, with emphasis on the function of art in culture. Three lecture hours a week for one semester.

**ARH 347M. Maya Art and Architecture.**

Same as Latin American Studies 327 (Topic 5: Form and Meaning in Classic Maya Art). The development and function of art and architectural form in the classic Maya culture. Three lecture hours a week for one semester.

**ARH 359. Topics in Feminism and Gender.**

An introduction to feminist and gender theories in relation to issues concerning visual representation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

**ARH 360L. Topics in the History of Photography.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 361. Topics in Latino and Chicano Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 361L. Topics in Ancient Near Eastern Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 362. Topics in Greek and Roman Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 362R. Topics in the Art of Late Antiquity.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 363. Topics in Medieval Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 364. Topics in Renaissance Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 365. Topics in Baroque Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 366J. Topics in Nineteenth-Century Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 366N. Topics in Twentieth-Century Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Contemporary Latin American Art, 1960 to the Present.**

Same as Latin American Studies 327 (Topic 4: Contemporary Latin American Art, 1960 to the Present). Painting, sculpture, media art, and environments.

**ARH 366P. Topics in Modernism.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 367. Topics in the Art of North America.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 3: Modernism in American Design and Architecture.**

Same as American Studies 330 and Urban Studies 352 (Topic 5: Modernism in American Design and Architecture). A historical survey of artifacts, buildings, and urban environments, focusing on responses to machine-age civilization. Prerequisite: Upper-division standing.

**ARH 370. Topics in Pre-Columbian Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

**ARH 372. Topics in the Art of Asia.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 2: Introduction to Japanese Art.****ARH 373C. Topics in Africana Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 373D. Topics in Diaspora Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**ARH 373E. Topics in African American Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **ARH 374. Special Topics in the History of Art.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: American Painting to 1860.** Same as American Studies 325 (Topic 2: American Painting to 1860).

**Topic 2: American Painting, 1860-1913.** Same as American Studies 325 (Topic 3: American Painting, 1860-1913).

### **ARH 375. Art Historical Methods.**

Restricted to art history majors. Art historical investigation; practical research techniques. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in art history and consent of the departmental undergraduate adviser.

### **ARH 376. Reading Tutorial in Art History Problems.**

Individual projects to be completed under faculty supervision. Independent study. May be repeated for credit. Prerequisite: For majors in the Department of Art and Art History, six semester hours of upper-division art history, a grade point average of at least 3.00, and consent of instructor and the chair of the department; for others, a grade point average of at least 3.00 and consent of instructor and the chair of the department.

### **ARH 379H. Thesis Course for Departmental Honors.**

Individual conference course in which student researches and writes a thesis. Independent study. Prerequisite: Admission to the Honors Program in Art History and approval of the honors adviser.

## **Design: DES**

### **Lower-Division Courses**

#### **DES 310. Introduction to Design.**

Intensive study of the discipline of design and its theories, methods, history, and economic and societal factors. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and written consent of the design faculty.

#### **DES 311J. Design Technologies I.**

Study of design technologies and their effect on design methods through a focus on tools and lens media. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and written consent of the design faculty.

#### **DES 311K. Design Technologies II.**

Introduction to the microcomputer as an integrator of visual information; its applications to organizational systems in the design process. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 310 and 311J with a grade of at least C in each.

#### **DES 312. Visual Syntax in Communication.**

Exploration of the fundamental visual elements and their organization through a study of typography and human perception. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 310 and 311J with a grade of at least C in each.

### **DES 313. Design History Laboratory.**

Critical investigation of historical issues, with emphasis on the dynamic relationship between the modern movement and contemporary design. Three lecture hours and five laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 310 and 311J with a grade of at least C in each.

### **Upper-Division Courses**

#### **DES 320. Design Theory and Method.**

Critical study of design methodologies and theories. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 311K, 312, and 313 with a grade of at least C in each, and written consent of the design faculty.

#### **DES 321. Images in Communication.**

Development of coherent visual statements constructed of images generated by multiple media. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 311K, 312, and 313 with a grade of at least C in each, and written consent of the design faculty.

#### **DES 322. Design and the Social Environment.**

Communication projects selected from the public sector. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 311K, 312, and 313 with a grade of at least C in each, and written consent of the design faculty.

#### **DES 340. Design Systems.**

Development of flexible, integrated visual systems. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 320, 321, and 322 with a grade of at least C in each.

#### **DES 341. Advanced Issues in Visual Syntax.**

Exploration of linguistic relationships involved in the development of typographic messages. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 320, 321, and 322 with a grade of at least C in each.

#### **DES 342. Design and Persuasion.**

Investigation of historical models; the role of words, context, and audience; and the effect of media. Eight laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Design 320, 321, and 322 with a grade of at least C in each.

#### **DES 350. Special Design Topics.**

Study of professional-level contemporary topics. Eight laboratory hours a week for one semester. Offered in the fall semester only. May be repeated for credit when the topics vary. Prerequisite: Design 340, 341, and 342 with a grade of at least C in each, and written consent of the design faculty.

#### **DES 351. Design Perspectives.**

Students create advanced design projects and present them for critique by visiting critics. Eight laboratory hours a week for one semester. Offered in the fall semester only. Prerequisite: Design 340, 341, and 342 with a grade of at least C in each, and written consent of the design faculty.

#### **DES 370. Senior Project in Design.**

Planning, execution, and presentation of a project approved by the design faculty. Eight laboratory hours a week for one semester.



Offered in the spring semester only. With consent of the design faculty, may be repeated for credit. Prerequisite: Design 350 and 351 with a grade of at least C in each, and written consent of the design faculty.

### **DES 371. Design Practicum.**

Practical experience through an internship; lectures on professional ethics and responsibilities. One lecture hour and ten laboratory hours a week for one semester. Offered in the spring semester only. With consent of the design faculty, may be repeated for credit. Prerequisite: Design 350 and 351 with a grade of at least C in each.

### **DES 376. Independent Study: Design.**

Individual projects to be completed under faculty supervision. The equivalent of eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Fifteen semester hours of upper-division coursework in design, a grade point average in upper-division design of at least 3.00, and consent of the chair of the department.

## **Studio Art: ART**

### **Lower-Division Courses**

#### **ART 303K (TCCN: ARTS 1316). Drawing Foundations.**

Drawing concepts and skills in various media. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: A major in the Department of Art and Art History.

#### **ART 303L. Digital Foundations.**

Introduction to digital, multimedia, and other time-based art. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: A major in the Department of Art and Art History.

#### **ART 304K (TCCN: ARTS 1311). Two-Dimensional Foundations.**

A basic course in the visual dynamics of two-dimensional art forms. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: A major in the Department of Art and Art History.

#### **ART 304L (TCCN: ARTS 1312). Three-Dimensional Foundations.**

A basic course in three-dimensional form and space. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: A major in the Department of Art and Art History.

#### **ART 310K (TCCN: ARTS 2346). Beginning Ceramics.**

Restricted to art and art history majors. Exploration of various techniques, subjects, and expressive possibilities in the medium of clay. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 311K (TCCN: ARTS 2316). Painting I.**

Restricted to art and art history majors. Introduction to painting techniques, composition, and exploration of personal expression. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 313K (TCCN: ARTS 2326). Beginning Sculpture.**

Restricted to art and art history majors. Introduction to the processes involved in the production of object-oriented sculpture using direct

methods of hot and cold construction. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 313M. Topics in Three-Dimensional Art.**

Restricted to art and art history majors. Study of specific techniques or problems. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 314K (TCCN: ARTS 2341). Beginning Metals and Jewelry.**

Restricted to art and art history majors. Introduction to the medium of metals, with emphasis on basic fabricating and forming techniques in jewelry, metalwork, and small sculpture. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 315K (TCCN: ARTS 1317). Beginning Drawing.**

Restricted to art and art history majors. Exploration of various methods, subjects, and expressive possibilities in drawing. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 316K (TCCN: ARTS 2323). Beginning Life Drawing.**

Restricted to art and art history majors. Problems in drawing and construction of the human figure in selected media. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 316T. Introduction to Transmedia.**

Restricted to art and art history majors. Introduction to the theory and practice of time-based art, including digital time-art, performance, and video art. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 316V may not both be counted. Studio Art 316T and 317C may not both be counted. Studio Art 316T and 318C may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 316V. Transmedia: Video Art I.**

Restricted to art and art history majors. Introduction to the basics of video art production, narrative, and nonnarrative video structural forms, including history, theory, camera techniques, montage, and digital editing. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 316V may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **ART 317C. Transmedia: Performance Art I.**

Restricted to art and art history majors. Introduction to the history, theory, and practice of performance art and its application in a variety of contexts, including theatrical, gallery, and the workaday world. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 317C may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**ART 317K (TCCN: ARTS 2356). Beginning Photography.**

Restricted to art and art history majors. An introduction to still photography, including basic technical skills and concepts. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**ART 318C. Transmedia: Digital Time-Art I.**

Restricted to art and art history majors. Introduction to time-based art, with emphasis on the exploration of digital technologies, including motion graphics, video, animation, and sound. Two lecture hours and six laboratory hours a week for one semester. May be taken for credit only once. Studio Art 316T and 318C may not both be counted. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**ART 319G. Beginning Printmaking: Serigraphy.**

Restricted to art and art history majors. Fundamental instruction in the theories, techniques, and practice of serigraphy. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**ART 319K. Beginning Printmaking: Intaglio.**

Restricted to art and art history majors. Introduction to the art of printmaking, primarily intaglio techniques such as etching, soft ground, aquatint, and assemblage. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**ART 319M. Beginning Printmaking: Lithography.**

Restricted to art and art history majors. Fundamental instruction in the theories, techniques, and shop practices of lithography. Eight laboratory hours a week for one semester. May be taken for credit only once. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**ART 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Studio Art.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**ART 319T. Topics in Studio Art: Laboratory.**

Restricted to art and art history majors. Intensive study of various disciplines of studio art. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**Upper-Division Courses****ART 320K. Topics in Studio Art.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320L. Topics in Studio Art.**

Open to all students. Continuation of Studio Art 320K. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Studio Art 320K with a grade of at least C.

**ART 320M. Topics in Ceramics.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320N. Topics in Design.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320P. Topics in Drawing.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320Q. Topics in Metals.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320R. Topics in Mixed Media.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320S. Topics in Painting.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320T. Topics in Photography.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320U. Topics in Printmaking.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320V. Topics in Sculpture.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 320W. Topics in Transmedia.**

Open to all students. Eight laboratory hours a week for one semester. May not be counted toward a degree in art and art history. May be repeated for credit when the topics vary.

**ART 321K. Painting II.**

Restricted to art and art history majors. Problems in composition and exploration of personal expression. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same

instructor in the same semester. Prerequisite: Studio Art 311K with a grade of at least C.

### **ART 321M. Painting II: Figure Painting.**

Restricted to art and art history majors. Problems in composition and exploration of personal expression with the life model. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 311K with a grade of at least C.

### **ART 322K. Intermediate Drawing.**

Restricted to art and art history majors. Continuation of Studio Art 315K. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 315K with a grade of at least C.

### **ART 323K. Intermediate Sculpture.**

Restricted to art and art history majors. Exploration of the concepts and processes involved in the production of object-oriented sculpture, with emphasis on indirect methods of mold-making and casting. Encourages individual direction. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 313K with a grade of at least C.

### **ART 323M. Advanced Topics in Three-Dimensional Art.**

Restricted to art and art history majors. Study of specific techniques or problems. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of studio art coursework with a grade of at least C in each course.

### **ART 323P. Issues in Sculpture.**

Restricted to art and art history majors. Topics related to the field of sculpture, from issue-based to media-based studies. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 313K with a grade of at least C.

### **ART 323S. Installation Sculpture.**

Restricted to art and art history majors. Exploration of the theories and methods involved in the production of installation sculpture through the investigation of form and space and of their function in transforming environmental, architectural, or invented sites. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 313K with a grade of at least C.

### **ART 324M. Intermediate Metals.**

Restricted to art and art history majors. Problems designed to encourage individual development in work with metals, incorporating metalsmithing and fabrication. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 314K with a grade of at least C.

### **ART 325G. Intermediate Printmaking: Serigraphy.**

Restricted to art and art history majors. Practice in the theories and techniques of multicolor serigraphy and photoserigraphy. Eight laboratory hours a week for one semester. May be taken twice

for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 319G with a grade of at least C.

### **ART 325K. Intermediate Printmaking: Intaglio.**

Restricted to art and art history majors. Instruction in the theories and techniques of intaglio printmaking, color, assemblage, stencil, viscosity, collography, photo process, and relief. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 319K with a grade of at least C.

### **ART 325M. Intermediate Printmaking: Lithography.**

Restricted to art and art history majors. Instruction in the theories and techniques of metal plate, multicolor, and stone lithography and photolithography. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 319M with a grade of at least C.

### **ART 327D. Sculptural Ceramics.**

Restricted to art and art history majors. Problems designed to encourage individual development in work with clay, exploring various handbuilding techniques and kiln firings. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 310K with a grade of at least C.

### **ART 327E. Contemporary Vessels.**

Restricted to art and art history majors. The study of pottery, including conceptual and functional approaches. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 310K with a grade of at least C.

### **ART 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Studio Art.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Art and Art History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **ART 334K. Digital Photography.**

Restricted to art and art history majors. Introduction to digital image-making in the context of creating art, including digital technologies and a historical overview of traditional and digital photographic practices. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 317K with a grade of at least C.

### **ART 335K. Intermediate Photography.**

Restricted to art and art history majors. Practice in still photography, including materials and processes. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 317K with a grade of at least C.

### **ART 336K. Color Photography.**

Restricted to art and art history majors. Instruction in basic principles, materials, and techniques of color photography as an art form. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 317K with a grade of at least C.

### **ART 336V. Transmedia: Video Art II.**

Restricted to art and art history majors. Projects in video art and video installation art. Surveys contemporary video art, stylistic modes, ideology, and the history of the artist's video and its precedents in the avant-garde and structuralist filmmaking. Two lecture hours and six laboratory hours a week for one semester. May be repeated twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316T or 316V with a grade of at least C.

### **ART 337C. Transmedia: Performance Art II.**

Restricted to art and art history majors. Projects in performance art with a concentration on the realization of more fully developed solo and collaborative projects. Two lecture hours and six laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316T or 317C with a grade of at least C.

### **ART 338C. Transmedia: Digital Time-Art II.**

Restricted to art and art history majors. Projects in time-based art, with emphasis on the exploration of digital technologies, including motion graphics, video, animation, and sound. Two lecture hours and six laboratory hours a week for one semester. May be repeated twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316T or 318C with a grade of at least C.

### **ART 339K. Watercolor Painting.**

Restricted to art and art history majors. Problems and instruction in the use of watercolor. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Two of the following courses, with a grade of at least C in each: Studio Art 311K, 315K, 316K.

### **ART 341K. Painting III.**

Restricted to art and art history majors. Continuation of Studio Art 321K. Eight laboratory hours a week for one semester. May be repeated for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 321K or 321M with a grade of at least C.

### **ART 341M. Painting III: Figure Painting.**

Restricted to art and art history majors. Continuation of Studio Art 321M. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 321M with a grade of at least C.

### **ART 346K. Intermediate Life Drawing.**

Restricted to art and art history majors. Advanced problems in drawing and construction of the human figure. Eight laboratory hours a week for one semester. May be taken twice for credit, but not with the same instructor in the same semester. Prerequisite: Studio Art 316K with a grade of at least C.

### **ART 354C. Computer Art Media.**

Restricted to art and art history majors. Principles, techniques, and practices of digital arts for studio artists. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit when the topics or instructors vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

**Topic 1: Digital Photography.** Introduction to digital image making in the context of making art.

### **ART 355. Studio Projects.**

Restricted to art and art history majors. Study of specific techniques or problems. Eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course.

**Topic 1: Design Issues.**

**Topic 2: Installation of Film Art.**

**Topic 3: Monoprinting and Relief Printing.**

### **ART 356K. Advanced Color Photography.**

Restricted to art and art history majors. Continuation of Studio Art 336K. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 336K with a grade of at least C.

### **ART 356V. Transmedia: Video Art III.**

Restricted to art and art history majors. Advanced study of video art and video installation art. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 336V with a grade of at least C.

### **ART 357C. Transmedia: Performance Art III.**

Restricted to art and art history majors. Advanced study of performance art with a concentration on the realization of more fully developed solo and collaborative projects. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 337C with a grade of at least C.

### **ART 358C. Transmedia: Digital Time-Art III.**

Restricted to art and art history majors. Advanced study of time-based art, with emphasis on the exploration of digital technologies, including motion graphics, video, animation, and sound. Two lecture hours and six laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 338C with a grade of at least C.

### **ART 359K. Advanced Digital Photography.**

Restricted to art and art history majors. Advanced study of digital image-making in the context of creating art, including digital



technologies and the historical developments of wet processes in black and white, color, and digital photography. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 334K with a grade of at least C.

#### **ART 361J. Painting IV: Figure Painting.**

Restricted to art and art history majors. Continuation of Studio Art 341M. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 341M with a grade of at least C.

#### **ART 361K. Painting IV.**

Restricted to art and art history majors. Continuation of Studio Art 341K. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 341K or 341M with a grade of at least C, and consent of painting faculty via application and portfolio review.

#### **ART 363K. Advanced Sculpture.**

Restricted to art and art history majors. Advanced research in the theory, technology, and methods involved in the production of sculpture, with emphasis on individual direction. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 323K with a grade of at least C.

#### **ART 363S. Advanced Installation Sculpture.**

Restricted to art and art history majors. Advanced research in the theory, technology, and methods involved in the production of installation sculpture, with emphasis on individual direction. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 323S with a grade of at least C.

#### **ART 364M. Advanced Metals.**

Restricted to art and art history majors. Emphasis on the development of a personal vision and an individual approach to the use of metal. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 324M with a grade of at least C.

#### **ART 365G. Advanced Printmaking: Serigraphy.**

Restricted to art and art history majors. Advanced practice in the art of serigraphy, with emphasis on independent research. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 325G with a grade of at least C.

#### **ART 365K. Advanced Printmaking: Intaglio.**

Restricted to art and art history majors. Advanced practice in the art of printmaking, involving independent research. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 325K with a grade of at least C.

#### **ART 365M. Advanced Printmaking: Lithography.**

Restricted to art and art history majors. Advanced instruction in the theories and techniques of metal plate, multicolor, and stone lithography and photolithography. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 325M with a grade of at least C.

#### **ART 366K. Advanced Life Drawing.**

Restricted to art and art history majors. Problems in drawing and construction of the human figure. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 346K with a grade of at least C.

#### **ART 368N. Advanced Drawing.**

Restricted to art and art history majors. Continuation of Studio Art 322K. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 322K with a grade of at least C.

#### **ART 372K. Advanced Photography.**

Restricted to art and art history majors. Advanced practice in still photography. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 335K with a grade of at least C.

#### **ART 376. Independent Study: Studio Art.**

Restricted to art and art history majors. Individual projects to be completed under faculty supervision. The equivalent of eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Completion of at least fifteen semester hours of upper-division coursework in studio art, a grade point average of at least 3.00 in upper-division coursework in the major, and consent of the chair of the department.

#### **ART 377D. Advanced Sculptural Ceramics.**

Restricted to art and art history majors. Continuation of Studio Art 327D. Emphasis on the development of a personal vision and an individual approach to the use of clay. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 327D with a grade of at least C.

#### **ART 377E. Advanced Contemporary Vessels.**

Restricted to art and art history majors. Continuation of Studio Art 327E. Additional focus on personal and technical development. Eight

laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 327E with a grade of at least C.

#### **ART 379K. Advanced Watercolor Painting.**

Restricted to art and art history majors. Problems and instruction in the use of watercolor, gouache, and tempera. Eight laboratory hours a week for one semester. May be repeated for credit, but (1) may not be taken for credit more than twice in the same semester, and (2) may not be taken for credit more than once with the same instructor in the same semester. Prerequisite: Studio Art 339K with a grade of at least C.

#### **ART 379R. Advanced Topics in Studio Art: Seminar.**

Restricted to art and art history majors. Intensive advanced study of issues in the various disciplines of studio art. Three seminar hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve semester hours of upper-division coursework in studio art.

#### **ART 179S, 379S. Advanced Topics in Studio Art: Lecture.**

Restricted to art and art history majors. Intensive advanced study of various disciplines of studio art. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For 179S, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; concurrent enrollment in Studio Art 279T; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course; for 379S, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course.

#### **ART 279T, 379T. Advanced Topics in Studio Art: Laboratory.**

Restricted to art and art history majors. Intensive advanced study of various disciplines of studio art. The equivalent of five or eight laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For 279T, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; concurrent enrollment in Studio Art 179S; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course; for 379T, upper-division standing; Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each; and twelve additional semester hours of coursework in studio art with a grade of at least C in each course.

## **Visual Art Studies: VAS**

### **Upper-Division Courses**

#### **VAS 320. Exploring Objects, Spaces, and Meaning.**

Open to all students. Focuses on a broad range of historical and contemporary works, artifacts, and environments, and their implications for understanding imagery and objects in visual and material culture. Three lecture hours a week for one semester. May not be repeated for credit.

#### **VAS 221C. Children's Artistic Development I.**

Theory and content for the development of perceptual, aesthetic, critical, studio, and art-historical skills. Two lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Visual Art Studies 121D.

#### **VAS 121D. Children's Artistic Development I: Laboratory.**

Practice in the development of perceptual, aesthetic, critical, studio, and art-historical skills. Four laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Visual Art Studies 221C.

#### **VAS 222C. Children's Artistic Development II.**

Continuation of Visual Art Studies 221C. Advanced theory and content for the development of perceptual, aesthetic, critical, studio, and art-historical skills. Two lecture hours a week for one semester. Prerequisite: Visual Art Studies 221C and 121D with a grade of at least C in each and concurrent enrollment in Visual Art Studies 122D.

#### **VAS 122D. Children's Artistic Development II: Laboratory.**

Continuation of Visual Art Studies 121D. Advanced practice in the development of art skills. Four laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Visual Art Studies 222C.

#### **VAS 330. Introduction to Visual Art Studies.**

Restricted to art and art history majors. An introduction to visual art studies: philosophy, current trends, instructional methods, evaluation, advocacy, and careers in art, museums, and cultural or social agencies. Three lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each.

#### **VAS 241C. Learners and Instructional Sites for Visual Art Studies.**

Restricted to art and art history majors. Instructional procedures, observations, and evaluation of early childhood through grade twelve classroom and community-based art instruction. Two lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 141D.

#### **VAS 141D. Learners and Instructional Sites for Visual Art Studies: Laboratory.**

Restricted to art and art history majors. Four laboratory hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 241C.

#### **VAS 251C. Art Materials, Techniques, and Processes.**

Restricted to art and art history majors. Exploration and application of basic materials, techniques, and processes in art production used in early childhood through grade twelve classroom and community-based art instruction. Two lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 151D.

#### **VAS 151D. Art Materials, Techniques, and Processes: Laboratory.**

Restricted to art and art history majors. Four laboratory hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L

with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 251C.

#### **VAS 261C. Criticism and Conversation about Art.**

Restricted to art and art history majors. Individual and professional evaluations of visual imagery, artifacts, and artistic production in a variety of settings. Two lecture hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 161D.

#### **VAS 161D. Criticism and Conversation about Art: Laboratory.**

Restricted to art and art history majors. Four laboratory hours a week for one semester. Prerequisite: Studio Art 303K, 303L, 304K, and 304L with a grade of at least C in each, and concurrent enrollment in Visual Art Studies 261C.

#### **VAS 271C. Topics in Visual Art Studies.**

Lectures on selected topics in visual art. Two lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and concurrent enrollment in Visual Art Studies 171D.

#### **VAS 171D. Topics in Visual Art Studies: Laboratory.**

Two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and concurrent enrollment in Visual Art Studies 271C.

#### **VAS 376. Independent Study: Visual Art Studies.**

Individual projects to be completed under faculty supervision. Individual instruction. May be repeated for credit. Prerequisite: Completion of twelve semester hours of upper-division coursework in the Department of Art and Art History, a grade point average in upper-division coursework in the Department of Art and Art History of at least 3.00, and consent of the chair of the department.

#### **VAS 379S. Advanced Topics in Visual Art Studies: Lecture.**

Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For majors in the Department of Art and Art History, upper-division standing; for others, upper-division standing and consent of instructor.

## **Sarah and Ernest Butler School of Music**

The University of Texas at Austin is an institutional member of the National Association of Schools of Music, approved for both its undergraduate and its graduate degrees in music. The requirements for entrance and for graduation given in this catalog are in accordance with the published regulations of the association.

### **Areas of Study**

The College of Fine Arts offers courses in several areas of music. The undergraduate courses available in music performance, music literature, music studies, and music theory are listed below; complete descriptions of all music courses begin after the table below.

## **Music Performance**

Before the first semester or summer session in which they will be enrolled, new and transfer students must file an Application for Instruction in Music Performance. The card indicates the faculty member to whom the student has been assigned.

All students enrolled in a music performance course must fill out a Music Performance and Jury Report at the end of each semester or summer session for each course taken.

Students who receive a grade below C- in any music performance course may not register for that course the next semester until the requests of other students for such work have been met.

Some of the following courses may be repeated for credit on the recommendation of the appropriate music performance jury.

- 101G. Beginning Music Performance.
- 201J. Beginning Class Piano for Nonmusic Majors.
- 201K. Second-Semester Class Piano for Nonmusic Majors.
- 201M. Beginning Music Performance: Class Piano.
- 201N. Beginning Music Performance: Second-Semester Class Piano.
- 201S. Beginning Music Performance: Class Harp.
- 201T. Beginning Music Performance: Second-Semester Class Harp.
- 210J. Beginning Instruction in Music Performance: Third-Semester Class Piano.
- 210K. Beginning Instruction in Music Performance: Fourth-Semester Class Piano.
- 111E. English Diction and Phonetic Translation.
- 311F. French for Musicians.
- 311G. German for Musicians.
- 311J. Italian for Musicians.
- 313. Fundamentals of Music.
- 115T. Lower-Division Reed Making.
- 219. Diction.
- 420J. Junior Jazz Recital.
- 420R. Junior Recital.
- 222J. Instrumental Conducting.
- 222K. Instrumental Conducting.
- 223J. Choral Conducting.
- 223K. Choral Conducting.
- 229. Diction.
- 159J. Harp Repertoire.
- 259L. Vocal Repertoire Coaching.
- 259N. Chamber Music: Strings and Piano.
- 259P. Chamber Music: Winds and Percussion.
- 259T. Topics in Instrumental Technology.
- 160C. Senior Composition Recital.
- 460J. Senior Jazz Recital.
- 260M. Pedagogy.
- 460P. Pedagogy.
- 460R. Senior Recital.
- 262. Intermediate Instrumental Conducting.
- 263K. Intermediate Choral Conducting.
- 366P. Senior Piano Pedagogy Project.

176C, Special Topics in Music Performance.

276C,  
376C.

178C, Independent Study: Music Performance.

278C,  
378C.

## Music Literature

101G. Beginning Music Performance.

201J. Beginning Class Piano for Nonmusic Majors.

201K. Second-Semester Class Piano for Nonmusic Majors.

201M. Beginning Music Performance: Class Piano.

201N. Beginning Music Performance: Second-Semester Class Piano.

201S. Beginning Music Performance: Class Harp.

201T. Beginning Music Performance: Second-Semester Class Harp.

210J. Beginning Instruction in Music Performance: Third-Semester Class Piano.

210K. Beginning Instruction in Music Performance: Fourth-Semester Class Piano.

111E. English Diction and Phonetic Translation.

311F. French for Musicians.

311G. German for Musicians.

311J. Italian for Musicians.

313. Fundamentals of Music.

115T. Lower-Division Reed Making.

219. Diction.

420J. Junior Jazz Recital.

420R. Junior Recital.

222J. Instrumental Conducting.

222K. Instrumental Conducting.

223J. Choral Conducting.

223K. Choral Conducting.

229. Diction.

159J. Harp Repertoire.

259L. Vocal Repertoire Coaching.

259N. Chamber Music: Strings and Piano.

259P. Chamber Music: Winds and Percussion.

259T. Topics in Instrumental Technology.

160C. Senior Composition Recital.

460J. Senior Jazz Recital.

260M. Pedagogy.

460P. Pedagogy.

460R. Senior Recital.

262. Intermediate Instrumental Conducting.

263K. Intermediate Choral Conducting.

366P. Senior Piano Pedagogy Project.

176C, Special Topics in Music Performance.

276C,  
376C.

178C, Independent Study: Music Performance.

278C,  
378C.

## Music Studies

101G. Beginning Music Performance.

201J. Beginning Class Piano for Nonmusic Majors.

201K. Second-Semester Class Piano for Nonmusic Majors.

201M. Beginning Music Performance: Class Piano.

201N. Beginning Music Performance: Second-Semester Class Piano.

201S. Beginning Music Performance: Class Harp.

201T. Beginning Music Performance: Second-Semester Class Harp.

210J. Beginning Instruction in Music Performance: Third-Semester Class Piano.

210K. Beginning Instruction in Music Performance: Fourth-Semester Class Piano.

111E. English Diction and Phonetic Translation.

311F. French for Musicians.

311G. German for Musicians.

311J. Italian for Musicians.

313. Fundamentals of Music.

115T. Lower-Division Reed Making.

219. Diction.

420J. Junior Jazz Recital.

420R. Junior Recital.

222J. Instrumental Conducting.

222K. Instrumental Conducting.

223J. Choral Conducting.

223K. Choral Conducting.

229. Diction.

159J. Harp Repertoire.

259L. Vocal Repertoire Coaching.

259N. Chamber Music: Strings and Piano.

259P. Chamber Music: Winds and Percussion.

259T. Topics in Instrumental Technology.

160C. Senior Composition Recital.

460J. Senior Jazz Recital.

260M. Pedagogy.

460P. Pedagogy.

460R. Senior Recital.

262. Intermediate Instrumental Conducting.

263K. Intermediate Choral Conducting.

366P. Senior Piano Pedagogy Project.

176C, Special Topics in Music Performance.

276C,  
376C.

178C, Independent Study: Music Performance.

278C,  
378C.

## Music Theory

101G. Beginning Music Performance.

201J. Beginning Class Piano for Nonmusic Majors.

201K. Second-Semester Class Piano for Nonmusic Majors.

201M. Beginning Music Performance: Class Piano.

201N. Beginning Music Performance: Second-Semester Class Piano.



201S. Beginning Music Performance: Class Harp.  
 201T. Beginning Music Performance: Second-Semester Class Harp.  
 210J. Beginning Instruction in Music Performance: Third-Semester Class Piano.  
 210K. Beginning Instruction in Music Performance: Fourth-Semester Class Piano.  
 111E. English Diction and Phonetic Translation.  
 311F. French for Musicians.  
 311G. German for Musicians.  
 311J. Italian for Musicians.  
 313. Fundamentals of Music.  
 115T. Lower-Division Reed Making.  
 219. Diction.  
 420J. Junior Jazz Recital.  
 420R. Junior Recital.  
 222J. Instrumental Conducting.  
 222K. Instrumental Conducting.  
 223J. Choral Conducting.  
 223K. Choral Conducting.  
 229. Diction.  
 159J. Harp Repertoire.  
 259L. Vocal Repertoire Coaching.  
 259N. Chamber Music: Strings and Piano.  
 259P. Chamber Music: Winds and Percussion.  
 259T. Topics in Instrumental Technology.  
 160C. Senior Composition Recital.  
 460J. Senior Jazz Recital.  
 260M. Pedagogy.  
 460P. Pedagogy.  
 460R. Senior Recital.  
 262. Intermediate Instrumental Conducting.  
 263K. Intermediate Choral Conducting.  
 366P. Senior Piano Pedagogy Project.  
 176C, Special Topics in Music Performance.  
 276C,  
 376C.  
 178C, Independent Study: Music Performance.  
 278C,  
 378C.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

The abbreviations used for performance courses are included in Appendix B (p. 633).

## Ensemble: ENS

### Lower-Division Courses

#### **ENS 103L (TCCN: MUSI 1157, MUSI 1158, MUSI 2157, MUSI 2158). Opera Laboratory.**

Performance and instruction in operatic theatre. Three laboratory hours a week for one semester, with additional laboratory hours as required.

May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 103P. Butler Opera Center Ensemble.**

Open to any University student who can qualify by audition. Instruction and performance in operatic acting, vocal coaching, and stage direction. Four laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit.

#### **ENS 105. Sight-Reading.**

Designed to develop and improve sight-reading skills in piano performance. Three laboratory hours a week for one semester. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 106. Accompanying.**

Designed for pianists, organists, and harpsichordists to improve ensemble playing and to give training in the technique of vocal and instrumental accompanying. One and one-half to three laboratory hours a week as required for one semester. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 107J. Jazz Orchestra.**

Advanced jazz ensemble. Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 107K. Large Instrumental Ensemble.**

Offered under various topics according to instrumentation, including Symphony Band, Symphony Orchestra, and Wind Ensemble. Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 107L. Longhorn Band.**

In the spring semester, this organization divides into multiple performing ensembles. Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 107S. Small Instrumental Ensemble.**

Offered under various topics according to instrumentation. Two laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108C. Texas Concert Band.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108D. Tower Concert Band.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108E. Longhorn Concert Band.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional

laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108F. Orange Concert Band.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108H. Longhorn Band Jazz Ensemble.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108K. Longhorn Band Percussion Ensemble.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 108M. Longhorn Band Color Guard Ensemble.**

One of several Longhorn Band ensembles offered in spring semesters. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 109C. Choral Ensemble.**

Offered under various topics according to ensemble composition, including University Chorus and Women's Chorus. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 109K. Chamber Singers.**

Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 109L. Concert Chorale.**

Six laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

#### **ENS 109P. Pop Choral Ensemble.**

Offered under various topics, including Longhorn Singers and Varsity Singers. Three laboratory hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Open to any University student who can qualify by audition.

## **Music: MUS**

### **Lower-Division Courses**

#### **MUS 101G. Beginning Music Performance.**

Class instruction in music performance for nonmusic majors and for music majors studying a secondary instrument. Sections are offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harpsichord, oboe, organ, percussion, recorder, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. Laboratory hours as required. May be repeated for credit when the instruments vary. Prerequisite: Ability to

read music. Students studying guitar must provide their own six-string nylon (classical) guitar.

#### **MUS 201J. Beginning Class Piano for Nonmusic Majors.**

Open to all University students, except music majors, who have no experience in piano. Three class hours a week for one semester. May be repeated for credit.

#### **MUS 201K. Second-Semester Class Piano for Nonmusic Majors.**

Open to all University students, except music majors, who can fulfill the prerequisite. Three class hours a week for one semester. May be repeated for credit. Prerequisite: Credit with a grade of at least C or registration for Music 201J, or consent by audition; and consent of instructor.

#### **MUS 201M. Beginning Music Performance: Class Piano.**

Open only to music majors. Three laboratory hours a week for one semester. Credit granted only when taken as a secondary instrument. May be repeated for credit. Prerequisite: Ability to read music, and concurrent enrollment in Music 605A or consent of instructor. No experience on the instrument required; for those with experience, consent by audition required.

#### **MUS 201N. Beginning Music Performance: Second-Semester Class Piano.**

Open only to music majors. Continuation of Music 201M. Three laboratory hours a week for one semester. Credit granted only when taken as a secondary instrument. May be repeated for credit. Prerequisite: Music 201M completed the previous semester with a grade of at least C, or consent by audition.

#### **MUS 201S. Beginning Music Performance: Class Harp.**

Open to all University students who can fulfill the prerequisite. Three laboratory hours a week for one semester. For music majors, credit granted only when taken as a secondary instrument. May be repeated for credit. Prerequisite: Ability to read music and consent of instructor. No previous experience on the instrument required.

#### **MUS 201T. Beginning Music Performance: Second-Semester Class Harp.**

Open to all University students who can fulfill the prerequisite. Three laboratory hours a week for one semester. For music majors, credit granted only when taken as a secondary instrument. May be repeated for credit. Prerequisite: Music 201S completed the previous semester with a grade of at least C, or consent by audition.

#### **MUS 302L (TCCN: MUSI 1306). An Introduction to Western Music.**

Open to all University students except music majors. Information and techniques for the intelligent appreciation of music: its elements, basic forms, and major style periods from the Middle Ages to the present. Three lecture hours a week for one semester, with one laboratory hour a week as required.

#### **MUS 302P. Introductory Topics in Western Music.**

May not be counted by music majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **MUS 303M. Introduction to Traditional Musics in World Cultures.**

Open to all University students. Art, sacred, and folk traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required. Asian Studies 303M and Music 303M may not both be counted.

### **MUS 303N. Introduction to Popular Musics in World Cultures.**

Same as Asian Studies 303N. Open to all University students. Popular traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required.

### **MUS 303P. Topics in Music of World Cultures.**

May not be counted by music majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **MUS 605 (TCCN: MUSI 1311, MUSI 1312). Musicianship.**

Study of the fundamentals of music for music majors through tonal harmony, ear training, sight-singing, keyboard drill, analysis, and composition of music. Three lecture hours and two laboratory hours a week for two semesters. Music 605 and 313 may not both be counted. Prerequisite: For 605A, either satisfactory completion of the audition required for admission to the Butler School of Music and registration in class piano as assigned by the Butler School of Music, or consent of instructor; for 605B, Music 605A with a grade of at least C, and registration in class piano as assigned by the Butler School of Music or consent of instructor.

### **MUS 205M. Acting for Voice Performance Majors I.**

Fundamental techniques of acting for the lyric stage, theoretical and direct application of dramatic monologue, art song, and operatic literature. Includes ensemble participation in Butler Opera Center production. Two lecture hours a week for one semester, with additional hours to be arranged. Music 205M and Theatre and Dance 303V may not both be counted. Prerequisite: A major in voice performance in the Butler School of Music.

### **MUS 205N. Acting for Voice Performance Majors II.**

Continuation of fundamental techniques of acting for the lyric stage, focusing on direct application of operatic solo literature, ensemble, and art song for performance. Includes ensemble participation in a Butler Opera Center production. Two lecture hours a week for one semester, with additional hours to be arranged. Music 205N and Theatre and Dance 303N may not both be counted. Prerequisite: Music 205M.

### **MUS 606. The Elements of Music.**

A course in the fundamentals of music for nonmusic majors. Study of notation, and of the elements of rhythm, melody, and harmony; development of elementary aural skills; writing of simple compositions. Three lecture hours a week for two semesters. Prerequisite: For 606B, Music 606A.

### **MUS 307 (TCCN: MUSI 1310). Topics in Popular Music.**

Open to all University students. Studies of the popular music of a selected culture or geographical area. Three lecture hours a week for one semester, with one laboratory hour a week as required. May be repeated for credit when the topics vary.

**Topic 1: Music of African Americans.** Same as African and African Diaspora Studies 317 (Topic 2: Music of African Americans).

**Topic 2: History of Rock Music.**

**Topic 3: Jazz Appreciation.**

### **MUS 210J. Beginning Instruction in Music Performance: Third-Semester Class Piano.**

Open only to music majors. Continuation of Music 201N. Three laboratory hours a week for one semester. Credit granted only when taken as a secondary instrument. May be repeated for credit. Prerequisite: Music 201N completed the previous semester with a grade of at least C, or consent by audition.

### **MUS 210K. Beginning Instruction in Music Performance: Fourth-Semester Class Piano.**

Open only to music majors. Continuation of Music 210J. Three laboratory hours a week for one semester. Credit granted only when taken as a secondary instrument. May be repeated for credit. Prerequisite: Music 210J completed the previous semester with a grade of at least C, or consent by audition.

### **MUS 411 (TCCN: MUSI 2216, MUSI 2217). Ear Training and Sight-Singing.**

Material drawn from all musical styles. Two lecture hours and one laboratory hour a week for two semesters. Prerequisite: For 411A, Music 605B with a grade of at least C, and concurrent enrollment in Music 612A; for 411B, Music 411A with a grade of at least C and concurrent enrollment in Music 612B.

### **MUS 111E (TCCN: MUSI 1161). English Diction and Phonetic Translation.**

Open only to music majors. Study of English diction and phonetic translation specifically for musicians. Emphasis on the International Phonetic Alphabet. One lecture hour a week for one semester.

### **MUS 311F. French for Musicians.**

Open only to music majors. French language and diction specifically for musicians. Three lecture hours and one laboratory hour a week for one semester.

### **MUS 311G. German for Musicians.**

Open only to music majors. German language and diction specifically for musicians. Three lecture hours and one laboratory hour a week for one semester.

### **MUS 311J. Italian for Musicians.**

Open only to music majors. Italian language and diction specifically for musicians. Three lecture hours and one laboratory hour a week for one semester.

### **MUS 612 (TCCN: MUSI 2311, MUSI 2312). Structure of Tonal Music.**

Elements of tonal harmony and form; tonal analysis. Three lecture hours a week for two semesters, with one laboratory hour a week as required. Prerequisite: For 612A, Music 605B with a grade of at least C, concurrent enrollment in Music 411A, and registration in class piano as assigned by the Butler School of Music or consent of instructor; for 612B, Music 612A with a grade of at least C, concurrent enrollment in Music 411B, and registration in class piano as assigned by the Butler School of Music or consent of instructor.

### **MUS 313. Fundamentals of Music.**

Designed to familiarize students who are not music majors with the meaning of musical notation and with the harmonic, melodic, and

rhythmic structure of music. Three lecture hours and one laboratory hour a week for one semester. Music 605 and 313 may not both be counted.

### **MUS 313M. History of Music I.**

The history of music from the beginning of notation to the eighteenth century. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 605 or consent of instructor.

### **MUS 313N. History of Music II.**

The history of music from the eighteenth century to the early twentieth century. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 313M or consent of instructor.

### **MUS 214C (TCCN: MUSI 1286). Beginning Composition.**

Introduction to contemporary composition through the analysis and writing of short studies and through supervised original projects. Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Concurrent enrollment in Music 411 and 612, or consent of instructor.

### **MUS 115D. String Instrument Fundamentals.**

Beginning instruction in string instrument performance and pedagogy. This course is offered in the following instruments: double bass, viola, violin, and violoncello. Individual or class instruction in music performance. Laboratory hours as required. May not be repeated for credit on the same instrument. May not be taken by music majors in their principal instrument. Prerequisite: A major in music.

### **MUS 115E. Brass Instrument Fundamentals.**

Beginning instruction in brass instrument performance and pedagogy. This course is offered in the following instruments: euphonium, French horn, trombone, trumpet, and tuba. Individual or class instruction in music performance. Laboratory hours as required. May not be repeated for credit on the same instrument. May not be taken by music majors in their principal instrument. Prerequisite: A major in music.

### **MUS 115F. Woodwind Instrument Fundamentals.**

Beginning instruction in woodwind instrument performance and pedagogy. This course is offered in the following instruments: bassoon, clarinet, flute, oboe, and saxophone. Individual or class instruction in music performance. Laboratory hours as required. May not be repeated for credit on the same instrument. May not be taken by music majors in their principal instrument. Prerequisite: A major in music.

### **MUS 115G. Guitar Fundamentals.**

Beginning instruction in guitar performance and pedagogy. Individual or class instruction in music performance. Laboratory hours as required. Prerequisite: A major in music or consent of instructor.

### **MUS 115T. Lower-Division Reed Making.**

Individual instruction. May be repeated for credit. Prerequisite: Consent of instructor.

### **MUS 316M. Introduction to Audio Recording.**

Fundamentals of modern multitrack audio recording, including analog and digital recording, microphones and microphone techniques, basic mixing and signal processing, technology, and terminology. Three lecture hours a week for one semester. Music 316M and Music Recording Technology 316M may not both be counted. Prerequisite: Consent of instructor.

### **MUS 316N. Intermediate Audio Recording.**

Intermediate techniques of modern multitrack audio recording, including stereo and remote location recording, intermediate microphone techniques, signal processing and automated mixing, and modern production techniques. Three lecture hours a week for one semester. Music 316N and Music Recording Technology 316N may not both be counted. Prerequisite: Music 316M or Music Recording Technology 316M, or consent of instructor.

### **MUS 218J. Beginning Jazz Improvisation.**

Study of basic jazz improvisational skills through performance of standard literature. Two class hours a week for one semester. Prerequisite: Music 605 or consent of instructor.

### **MUS 219. Diction.**

French and English pronunciation for singers. Two lecture hours a week for one semester.

### **MUS 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Music.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Butler School of Music. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **MUS 420J. Junior Jazz Recital.**

Preparation and performance of a half-hour public recital in the major jazz instrument. Individual instruction. Prerequisite: For jazz composition majors, course 212J in the major jazz instrument for two semesters, or the equivalent, and approval of the jazz faculty; for jazz performance majors, course 412J in the major jazz instrument for two semesters, or the equivalent, and approval of the jazz faculty.

### **MUS 420R. Junior Recital.**

Preparation and performance of a half-hour public recital in the major instrument. Individual instruction. Prerequisite: Course 412 (or 410) in the major instrument for four semesters, or the equivalent, and approval of the faculty.

### **MUS 221J, 321J. Musical Analysis.**

Detailed study of selected compositions from the tonal and post-tonal periods; analytical and compositional projects. Two or three lecture hours a week for one semester. Prerequisite: Music 411 and 612.

### **MUS 221K. Musical Analysis.**

Continuation of Music 221J. Two lecture hours a week for one semester. Prerequisite: Music 221J.

### **MUS 222J. Instrumental Conducting.**

Designed for those who have had no experience in conducting. Includes rudimentary use of baton, regular and irregular beat patterns, subdivisions and beat pattern variations as applied to simple instrumental literature, and practical experience in conducting instrumental groups. Two class hours a week for one semester. Prerequisite: Upper-division standing in music or consent of instructor.



**MUS 222K. Instrumental Conducting.**

Continuation of Music 222J. Further technical study in irregular meters, polyrhythmic and polymetrical patterns and scores; emphasis on expressive gestures, phrasal and compound beat conducting. Two class hours a week for one semester. Prerequisite: Music 222J or consent of instructor.

**MUS 223J. Choral Conducting.**

Designed for those who have had no experience in conducting. Includes regular and irregular beat patterns, subdivisions and beat pattern variations as applied to simple choral literature, and practical experience in conducting vocal groups. Two class hours a week for one semester. Prerequisite: Upper-division standing in music.

**MUS 223K. Choral Conducting.**

Continuation of Music 223J. Further technical study in irregular meters, polyrhythmic and polymetrical patterns and scores; emphasis on expressive gestures, phrasal and compound beat conducting. Two class hours a week for one semester. Prerequisite: Music 223J or consent of instructor.

**MUS 224G. Intermediate Composition.**

Continuation of Music 214C. The equivalent of two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 214C with a grade of at least B, and approval of the music theory and composition faculty.

**MUS 224J. Advanced Composition.**

Continuation of Music 224G for composition majors only. The equivalent of two lecture hours and one laboratory hour a week for one semester. With consent of the music theory and composition faculty, may be repeated for credit. Prerequisite: Music 224G with a grade of at least B, and approval of the music theory and composition faculty.

**MUS 325L. Counterpoint.**

Development of contrapuntal skill in sixteenth-century style and in related late-twentieth-century styles; the teaching of counterpoint, including Fuxian species. Three lecture hours a week for one semester. Prerequisite: Music 411 and 612.

**MUS 325M. Counterpoint.**

Analysis of eighteenth-century inventions, fugues, and passacaglias; development of contrapuntal skills in twentieth-century styles that draw on these historical models; the teaching of counterpoint. Three lecture hours a week for one semester.

**MUS 226G. Orchestration and Arranging.**

Techniques of instrumentation, arranging, and orchestration for band, orchestra, and chamber ensembles. Two lecture hours a week for one semester. Prerequisite: Music 411 and 612.

**MUS 226J. Orchestration and Instrumentation.**

Study of the characteristics of individual instruments; writing for various combinations; study of scores of different periods; listening to recordings and live performances. Two lecture hours a week for one semester. Prerequisite: Music 411 and 612.

**MUS 226K. Orchestration and Instrumentation.**

Continuation of Music 226J. Two lecture hours a week for one semester. Prerequisite: Music 226J.

**MUS 226N. Choral Arranging.**

Techniques of voicing and arranging for choirs, vocal ensembles, and vocal chamber groups. Two lecture hours a week for one semester. Prerequisite: Music 411 and 612.

**MUS 228G. Jazz Theory I.**

Study of the elements of jazz and popular styles, with emphasis on written theory and keyboard skills. Two lecture hours a week for one semester. Prerequisite: Music 201N and 605, or consent of instructor.

**MUS 228J. Intermediate Jazz Improvisation.**

Continuation of Music 218J. Two class hours a week for one semester. Prerequisite: Music 201N, 605, 218J, and 228G; or consent of instructor.

**MUS 228K. Beginning Jazz Piano Techniques.**

Designed for music majors (pianists and nonpianists) seeking basic skills in chord notation, chord interpretation and voicing, voice leading, and chord and scale relationships for improvisation. Three laboratory hours a week for one semester. Prerequisite: Music 210K and 612, or consent of instructor.

**MUS 228L. Jazz Theory II.**

Continuation of the concepts taught in Music 228G, with an emphasis on ear training, harmonic motion of jazz, and harmonic embellishment. Two lecture hours a week for one semester. Prerequisite: Music 228G.

**MUS 328M. Studio Arranging.**

Techniques of composing and arranging for standard jazz and popular music instrumental combinations in varied styles. Three lecture hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Music 612 and 228G, or consent of instructor.

**MUS 228P. Jazz Composition.**

Individual instruction in the creative process of composition, involving the melodic, harmonic, and rhythmic components of various jazz styles. Individual instruction. May be repeated for credit. Prerequisite: Music 328M or consent of instructor.

**MUS 229. Diction.**

Italian and German pronunciation for singers. Two lecture hours a week for one semester. Prerequisite: Upper-division standing.

**MUS 329E. Introduction to Electronic Media.**

Introduction to the fundamentals of recording, tape editing, and electronic music synthesis. Three lecture hours and six laboratory hours a week for one semester. Prerequisite: Consent of instructor.

**MUS 329F. Projects in Electronic Media.**

Continuation of Music 329E for nontheory and noncomposition majors. One and one-half lecture hours and eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Music 329E and consent of instructor.

**MUS 329G. Intermediate Electronic Composition.**

Continuation of Music 329E for music theory or composition majors. Three lecture hours and six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Music 329E and consent of instructor.

### **MUS 329J. Introduction to Computer Music.**

An introduction to the basic concepts of digital music synthesis and signal processing. One and one-half lecture hours and eight laboratory hours a week for one semester. Prerequisite: Music 329E and consent of instructor.

### **MUS 329M. Intermediate Computer Music.**

Continuation of Music 329J. One and one-half lecture hours and eight laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Music 329J and consent of instructor.

### **MUS 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Music.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Butler School of Music. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **MUS 330L. History of Music III.**

The history of music from the early twentieth century to the present. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 313N or consent of instructor.

### **MUS 334. The Music of the Americas.**

Studies of both indigenous and borrowed traditions in the popular, folk, and art music of the Americas from the colonial period to the present. Three lecture hours a week for one semester, with one laboratory hour a week as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Music of Mexico and the Caribbean.** Same as Latin American Studies 326 (Topic 1: Music of Mexico and the Caribbean). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of Mexico and the Caribbean), 326 (Topic 1), Music 334 (Topic 1).

**Topic 2: Music of Latin America.** Same as Latin American Studies 326 (Topic 2: Music of Latin America). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of Latin America), 326 (Topic 2), Music 334 (Topic 2).

**Topic 3: Music of Brazil and Argentina.** Same as Latin American Studies 326 (Topic 3: Music of Brazil and Argentina). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of Brazil and Argentina), 326 (Topic 3), Music 334 (Topic 3).

**Topic 4: Music of the Andean Countries.** Same as Latin American Studies 326 (Topic 4: Music of the Andean Countries). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of the Andean Countries), 326 (Topic 4), Music 334 (Topic 4).

### **MUS 335M. Fundamentals of Digital Audio Workstations.**

An overview of the history and theory behind digital audio and digital audio recording, including stand-alone and computer-based digital audio workstations. Three lecture hours a week for one semester. Music 335M and Music Recording Technology 335M may not both be counted. Prerequisite: Music 316N or Music Recording Technology 316N, or consent of instructor.

### **MUS 335N. Advanced Digital Audio Workstations.**

Includes advanced editing, MIDI control surfaces, use of Beat Detective application, surround and synchronization, advanced mixing,

plug-ins, third-party digital audio workstation add-ons, soft synthesizers and samplers, and digital mastering techniques and practices. Three lecture hours a week for one semester. Music 335N and Music Recording Technology 335N may not both be counted. Prerequisite: Music 335M or Music Recording Technology 335M, or consent of instructor.

### **MUS 336C. Computer Audio Production.**

Desktop music production, including the history of computer music, MIDI and specialized digital audio for multimedia production, loop-based music, contemporary production styles, and music production environments. Three lecture hours a week for one semester. Music 336C and Music Recording Technology 336C may not both be counted. Prerequisite: Music 335N or Music Recording Technology 335N, or consent of instructor.

### **MUS 337. Music and Film Sound.**

History of music and the soundtrack; analysis of interactions between image and sound; and aesthetics and issues of production and postproduction. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **MUS 338. Masterpieces of Music.**

Study of the works of specific composers or of specific genres in the Western musical tradition. Three lecture hours a week for one semester. May not be counted by music majors. May be repeated for credit when the topics vary. Prerequisite: Music 302L or consent of instructor.

### **MUS 339M. Introduction to the Music Business and Entrepreneurship.**

An overview of the dynamics and business challenges of the contemporary music performance world, with an emphasis on the study of the rapidly changing musical culture and an increasingly competitive and diversified marketplace. Guest lecturers include professional conductors, directors of large performance venues, classical and pop music performers, music critics, songwriters, music publishers, entertainment law attorneys, and record producers. Three lecture hours a week for one semester. Only one of the following may be counted: Music 339M, 376C (Topic: Business of Music), Music Business 339M. Prerequisite: Upper-division standing.

### **MUS 339N. Music Entrepreneurship.**

Further exploration of the dynamics and business challenges of the contemporary music performance world, with emphasis on entrepreneurial savvy, communication skills, fluency with emerging technologies, commitment to audience education, public advocacy for music, and the future health and growth of musical culture. Three lecture hours a week for one semester. Music 339N and Music Business 339N may not both be counted. Prerequisite: Upper-division standing and Music 339M or Music Business 339M.

### **MUS 342. Area Studies in Ethnomusicology.**

Studies of the musical traditions of selected cultures or geographical areas. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Musics of India.** Same as Anthropology 324L (Topic 13: Musics of India) and Asian Studies 361 (Topic 11: Musics of India). Prerequisite: Upper-division standing.

**Topic 5: Black Perspectives in Jazz.** Same as African and African Diaspora Studies 374 (Topic 10: Black Perspectives in Jazz).  
Prerequisite: Upper-division standing.

**Topic 6: Musics of East and Southeast Asia.** Same as Asian Studies 361 (Topic 15: Musics of East and Southeast Asia).  
Prerequisite: Upper-division standing.

### **MUS 343J. History of Jazz.**

Survey of the history of jazz from its origins to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing in music or consent of instructor.

### **MUS 345. Advanced Audio Recording.**

Contemporary audio recording and production styles. Advanced techniques for specific recordings and musical styles, including ensemble recording in a multitrack environment. Three lecture hours a week for one semester. Music 345 and Music Recording Technology 345 may not both be counted. Prerequisite: Music 336C or Music Recording Technology 336C, or consent of instructor.

### **MUS 347M. Music Copyright and Publishing.**

Recording, music publishing, and personal management agreements and how they affect the artist and writer. Includes negotiation considerations, deal points, record company economics and profitability, intellectual property rights, publishing and the control and exploitation of publishing rights in music property, publishing activities, performing rights organizations, catalog sales and acquisitions, publisher and songwriter relations, and royalty accounting. Three lecture hours a week for one semester. Music 347M and Music Business 347M may not both be counted. Prerequisite: Upper-division standing.

### **MUS 347N. Topics in the Business of Music and the Arts.**

Three lecture hours a week for one semester. Music 347N and Music Business 347N may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **MUS 354. Musical Development of Children.**

The processes of musical development in young children. Topics include music in multicultural contexts, music in the cognitive and social development of young children, and special issues concerning music and exceptional children. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **MUS 354C. Children's Music Literature and Performance I.**

Literature, materials, and music performance activities appropriate for young children. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Music 605 or 313, upper-division standing in music studies, or consent of instructor.

### **MUS 354D. Children's Music Literature and Performance II.**

Continuation of Music 354C. Three lecture hours a week for one semester. Prerequisite: Music 354C or consent of instructor.

### **MUS 354F. Music Performance, Listening, and Appreciation.**

Techniques and materials for the development of skill in composition, arranging, performance, and aural discrimination; problems related to the adolescent voice. Three lecture hours and one laboratory hour a week for one semester.

### **MUS 155C. Techniques of Percussion Performance.**

Percussion performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two laboratory hours a week for one semester. Prerequisite: Upper-division standing in music studies.

### **MUS 255D. Techniques of String Performance.**

String instrument performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.

### **MUS 255E. Techniques of Brass Performance.**

Brass instrument performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.

### **MUS 255F. Techniques of Woodwind Performance.**

Woodwind instrument performance techniques for individual and ensemble settings, including appropriate literature and rehearsal procedures. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.

### **MUS 255M. Marching Band Techniques.**

Literature, materials, and techniques of the marching band. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music studies.

### **MUS 255V. Techniques of Vocal Performance.**

Technique of individual and ensemble singing practiced through the study of vocal literature. Two lecture hours a week for one semester. Prerequisite: Upper-division standing in music studies.

### **MUS 356G. Choral Ensemble Literature and Performance.**

Choral music literature; rehearsal and performance techniques for choirs and small ensembles. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music studies or consent of instructor.

### **MUS 356J. Instrumental Ensemble Literature and Performance.**

Study of the literature and of performance and rehearsal techniques for heterogeneous instrumental ensembles. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music studies and Music 210K.

### **MUS 159J. Harp Repertoire.**

Study and performance of the harp repertoire. One laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.

### **MUS 259L. Vocal Repertoire Coaching.**

Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.

### **MUS 259N. Chamber Music: Strings and Piano.**

The equivalent of two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 411, 612, and consent of instructor.

**MUS 259P. Chamber Music: Winds and Percussion.**

The equivalent of two lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 411, 612, and consent of instructor.

**MUS 259T. Topics in Instrumental Technology.**

Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

**MUS 160C. Senior Composition Recital.**

Open only to music composition majors. Preparation and performance of a thirty-minute public recital of the student's original compositions. Individual instruction.

**MUS 460J. Senior Jazz Recital.**

Open only to jazz performance majors. Preparation and performance of a one-hour public recital in the major jazz instrument. Individual instruction. Prerequisite: Music 420J and approval of the jazz faculty.

**MUS 260M. Pedagogy.**

An intensive study of repertoire and methods, designed for students planning to specialize in teaching. May be repeated for credit when the topics vary.

**Topic 1: Woodwind Instruments.** The equivalent of two laboratory hours a week for one semester. Prerequisite: Two semesters of instrument course 260 and approval of the faculty in one of the woodwind instruments.

**Topic 2: Brass Instruments.** The equivalent of two laboratory hours a week for one semester. Prerequisite: Two semesters of instrument course 260 and approval of the faculty in one of the brass instruments.

**Topic 3: Piano.** Offered in the summer session only, in conjunction with the High School Piano Performance Workshop; meets four hours a day for two weeks. May not be substituted for Music 460PA or 460PB. May be repeated for credit. Prerequisite: Piano 412 or consent of instructor.

**Topic 4: Strings.** The equivalent of two laboratory hours a week for one semester. Prerequisite: Two semesters of instrument course 260 and approval of the faculty in one of the string instruments.

**Topic 5: Group Piano.** The development of skills in teaching group piano. Examination of methods and materials used in keyboard instruction and for improvisation, sight-reading, and score reading. Two lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing in music and consent of instructor.

**MUS 460P. Pedagogy.**

Designed primarily for students planning teaching careers. This course is offered in harp, piano, strings, woodwinds, brass, percussion, and voice. Methods of individual and class instruction through the use of music literature and the teaching repertoire. Practice teaching and laboratory for diagnostic and corrective methods are required. Two lecture hours a week for two semesters. Upon recommendation of the faculty, Music 460P and two semesters of instrument course 260 and approval of the faculty in the student's instrument may be substituted for instrument course 462 and Music 460R. Prerequisite: For 460PA, instrument course 462 and approval of the faculty, and consent of instructor; for 460PB, Music 460PA.

**MUS 460R. Senior Recital.**

Open only to music performance majors. Preparation and performance of a one-hour public recital in the major instrument. Individual instruction. Prerequisite: For performance majors approved to pursue a pedagogy emphasis, approval of the faculty; for other performance majors, Music 420R and approval of the faculty.

**MUS 262. Intermediate Instrumental Conducting.**

Problems and interpretation of larger band and orchestral works; analytical study of musical form as it relates to conducting; a synthesis of musical understanding and expansion of comprehensive musicianship through conducting problems. Two class hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: Music 222K or consent of instructor.

**Topic 1: Band.** May be repeated for credit.

**Topic 2: Orchestra.** May be repeated for credit.

**MUS 263K. Intermediate Choral Conducting.**

Problems and interpretation of larger choral works. Analytical study of musical form as it relates to conducting. A synthesis of musical understanding and expansion of comprehensive musicianship through conducting problems. Two class hours a week for one semester. May be repeated for credit. Prerequisite: Music 223K or consent of instructor.

**MUS 164L, 364L. Advanced Ear Training.**

Further development of techniques taught in Music 411, with emphasis on aural recognition of larger musical forms and of music of contemporary style. For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Upper-division standing in music and Music 411 and 612.

**MUS 366P. Senior Piano Pedagogy Project.**

Open only to senior piano performance majors pursuing the pedagogy option. Students complete a research paper on a piano pedagogy topic, such as methodology, skills development, or repertoire. Individual instruction. Prerequisite: Upper-division standing and Music 460P with a grade of at least B.

**MUS 368L. Review of Music Theory.**

An intensive review of the skills and concepts required for the study of music theory at the graduate level. Three lecture hours a week for one semester. May not be counted toward a graduate degree. Prerequisite: Upper-division or graduate standing in music.

**MUS 369P. Senior Paper in Music Theory.**

Writing of a major paper on a topic in music theory approved by the instructor. The equivalent of three lecture hours a week for one semester. Prerequisite: Music 221K with a grade of at least B, at least seven semester hours of upper-division coursework in music theory, and consent of instructor.

**MUS 176C, 276C, 376C. Special Topics in Music Performance.**

For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.



### **MUS 376G. Special Topics in Music Literature.**

Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

### **MUS 376J. Special Topics in Music Theory.**

Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**Topic 1: Twentieth-Century Music Techniques.** Restricted to graduate music students who need review of course content. Review of techniques and methods for analyzing twentieth-century music.

### **MUS 176M. Special Topics in Music Studies.**

One class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

### **MUS 677P. Internship and Final Project.**

Restricted to seniors. Practical experience in the music and recording industry related to the student's area of interest within the music business, recording technology, or electronic media. Comprehensive final project addresses entrepreneurship, as well as technical and business elements of the music and recording industry. Forty hours a week for one semester. Prerequisite: Completion of the program requirements for enrollment in an internship course and consent of the program director.

### **MUS 178C, 278C, 378C. Independent Study: Music Performance.**

Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.

### **MUS 178G, 278G, 378G. Independent Study: Music Literature.**

Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.

### **MUS 178J, 278J, 378J. Independent Study: Music Theory.**

Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.

### **MUS 178M, 278M, 378M. Independent Study: Music Studies.**

Individual projects to be completed under faculty supervision. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the director of the school.

### **MUS 379K. Advanced Topics in Music Literature.**

Three lecture hours a week for one semester. Two or more topics may be taken concurrently. May be repeated for credit when the topics vary. Prerequisite: Music 612 and 313N, or upper-division standing and consent of instructor.

**Topic 1: Topics in Keyboard Literature.**

**Topic 2: Piano Literature, Eighteenth Century to the Present.**

**Topic 5: Topics in Instrumental Chamber Music.**

**Topic 6: Topics in Symphonic Tradition.**

**Topic 7: Topics in Instrumental Concerto.**

**Topic 8: Topics in the Art Song.**

**Topic 9: Topics in Opera and Music Drama.**

**Topic 10: Topics in Mass and Motet.**

**Topic 11: Topics in Choral Music.**

**Topic 12: Topics in Cantata and Oratorio.**

**Topic 13: Topics in Modern Music.**

**Topic 14: Special Topics in the Western Musical Tradition.**

**Topic 17: Topics in Instrumental Wind Music.**

## **Music Business: MBU**

### **Upper-Division Courses**

#### **MBU 339M. Introduction to the Music Business and Entrepreneurship.**

An overview of the dynamics and business challenges of the contemporary music performance world, with an emphasis on the study of the rapidly changing musical culture and an increasingly competitive and diversified marketplace. Guest lecturers include professional conductors, directors of large performance venues, classical and pop music performers, music critics, songwriters, music publishers, entertainment law attorneys, and record producers. Three lecture hours a week for one semester. Only one of the following may be counted: Music 339M, 376C (Topic: Business of Music), Music Business 339M. Prerequisite: Upper-division standing.

#### **MBU 339N. Music Entrepreneurship.**

Further exploration of the dynamics and business challenges of the contemporary music performance world, with emphasis on entrepreneurial savvy, communication skills, fluency with emerging technologies, commitment to audience education, public advocacy for music, and the future health and growth of musical culture. Three lecture hours a week for one semester. Music 339N and Music Business 339N may not both be counted. Prerequisite: Upper-division standing and Music 339M or Music Business 339M.

#### **MBU 347M. Music Copyright and Publishing.**

Recording, music publishing, and personal management agreements and how they affect the artist and writer. Includes negotiation considerations, deal points, record company economics and profitability, intellectual property rights, publishing and the control and exploitation of publishing rights in music property, publishing activities, performing rights organizations, catalog sales and acquisitions, publisher and songwriter relations, and royalty accounting. Three lecture hours a week for one semester. Music 347M and Music Business 347M may not both be counted. Prerequisite: Upper-division standing.

#### **MBU 347N. Topics in the Business of Music and the Arts.**

Three lecture hours a week for one semester. Music 347N and Music Business 347N may not both be counted unless the topics vary. May

be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **MBU 377P. Internship and Final Project.**

Restricted to seniors in the music business concentration. Practical experience in the music industry related to the student's area of interest within the music business. Comprehensive final project addresses entrepreneurship, as well as business elements of the music industry. Forty hours a week for one semester. Only one of the following may be counted: Music 677P, Music Business 377P, Music Recording Technology 377P. Prerequisite: Completion of the program requirements for enrollment in an internship course and consent of the program director.

## **Music Recording Technology: MRT**

### **Lower-Division Courses**

#### **MRT 316M. Introduction to Audio Recording.**

Fundamentals of modern multitrack audio recording, including analog and digital recording, microphones and microphone techniques, basic mixing and signal processing, technology, and terminology. Three lecture hours and three laboratory hours a week for one semester. Music 316M and Music Recording Technology 316M may not both be counted. Prerequisite: Consent of instructor.

#### **MRT 316N. Intermediate Audio Recording.**

Intermediate techniques of modern multitrack audio recording, including stereo and remote location recording, intermediate microphone techniques, signal processing and automated mixing, and modern production techniques. Three lecture hours and three laboratory hours a week for one semester, with additional laboratory hours as required. Music 316N and Music Recording Technology 316N may not both be counted. Prerequisite: Music 316M or Music Recording Technology 316M, or consent of instructor.

### **Upper-Division Courses**

#### **MRT 335M. Fundamentals of Digital Audio Workstations.**

An overview of the history and theory behind digital audio and digital audio recording, including stand-alone and computer-based digital audio workstations. Three lecture hours a week for one semester. Music 335M and Music Recording Technology 335M may not both be counted. Prerequisite: Music 316N or Music Recording Technology 316N, or consent of instructor.

#### **MRT 335N. Advanced Digital Audio Workstations.**

Includes advanced editing, MIDI control surfaces, use of Beat Detective application, surround and synchronization, advanced mixing, plug-ins, third-party digital audio workstation add-ons, soft synthesizers and samplers, and digital mastering techniques and practices. Three lecture hours a week for one semester. Music 335N and Music Recording Technology 335N may not both be counted. Prerequisite: Music 335M or Music Recording Technology 335M, or consent of instructor.

#### **MRT 336C. Computer Audio Production.**

Desktop music production, including the history of computer music, MIDI and specialized digital audio for multimedia production, loop-based music, contemporary production styles, and music production environments. Three lecture hours a week for one semester. Music 336C and Music Recording Technology 336C may not both be

counted. Prerequisite: Music 335N or Music Recording Technology 335N, or consent of instructor.

#### **MRT 345. Advanced Audio Recording.**

Contemporary audio recording and production styles. Advanced techniques for specific recordings and musical styles, including ensemble recording in a multitrack environment. Three lecture hours and three laboratory hours a week for one semester, with additional laboratory hours as required. Music 345 and Music Recording Technology 345 may not both be counted. Prerequisite: Music 336C or Music Recording Technology 336C, or consent of instructor.

#### **MRT 377P. Internship and Final Project.**

Restricted to seniors in the music recording technology concentration. Practical experience in the music recording industry related to the student's area of interest within recording technology or electronic media. Comprehensive final project addresses entrepreneurship, as well as technical elements of the music recording industry. Forty hours a week for one semester. Only one of the following may be counted: Music 677P, Music Business 377P, Music Recording Technology 377P. Prerequisite: Completion of the program requirements for enrollment in an internship course and consent of the program director.

## **Performance: PRF**

### **Lower-Division Courses**

#### **PRF 201. Lower-Division Music Performance: Secondary.**

Individual instruction in music performance for nonmusic majors and for music majors studying a secondary instrument. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, oboe, organ, percussion, piano, recorder, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. Individual instruction. May be repeated for credit. Prerequisite: The ability to read music, and, for most instruments, an audition. For Guitar 201, at least two years of classical guitar lessons. For Piano 201, at least one year of piano lessons.

#### **PRF 202. Lower-Division Piano: Secondary.**

Individual instruction beyond Music 210K. May be repeated for credit when the topics vary. Prerequisite: Consent by audition.

#### **PRF 212, 312, 412. Lower-Division Music Performance: Major.**

Individual instruction in music performance for students majoring in music performance or music performance pedagogy. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, and violoncello. Individual instruction. May be repeated for credit.

#### **PRF 212J, 312J, 412J. Lower-Division Music Performance: Improvisation.**

Individual instruction in improvisation for students majoring in jazz composition or jazz performance. This course is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone. Individual instruction. May be repeated for credit.

## Upper-Division Courses

### PRF 251. Upper-Division Music Performance: Secondary.

Individual instruction in music performance for nonmusic majors and for music majors studying a secondary instrument. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, recorder, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. Individual instruction. May be repeated for credit. Prerequisite: Course 201 in the secondary instrument for four semesters, or the equivalent, and approval of the area faculty.

### PRF 262, 362, 462. Upper-Division Music Performance: Major.

Individual instruction in music performance for students majoring in music performance. This course is offered in the following instruments: bassoon, clarinet, double bass, euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, violoncello, and voice. Individual instruction. May be repeated for credit. Prerequisite: For Voice 462, Voice 210 for four semesters, or the equivalent, and approval of the music faculty; for other instruments, course 412 in the major instrument for four semesters, or the equivalent, and approval of the music faculty.

### PRF 262J, 362J, 462J. Upper-Division Music Performance: Improvisation.

Individual instruction in improvisation for students majoring in jazz composition and jazz performance. This course is offered in the following instruments: double bass, drum set, guitar, piano, saxophone, trombone, trumpet, and vibraphone. Individual instruction. May be repeated for credit. Prerequisite: For jazz composition majors, course 212J for two semesters, or the equivalent, and approval of the appropriate music faculty; for jazz performance majors, course 412J for two semesters, or the equivalent, and approval of the appropriate music faculty.

## Department of Theatre and Dance

Registration with a member of the department faculty is required of students planning to major in the Department of Theatre and Dance and of those enrolling in courses that require faculty permission.

All students majoring in the department are required to act in productions or to serve on technical crews as scheduled by the faculty of the department.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Theatre and Dance: T D

### Lower-Division Courses

#### T D 301 (TCCN: DRAM 1310). Introduction to Theatre.

Open to all University students except majors in the Department of Theatre and Dance. A study of theatrical texts and practices of the past

and present. Three lecture hours a week for one semester; attendance at all major productions of the department is required.

#### T D 102T, 202T, 302T. Topics in Dance Technique.

Fundamental study of principles and vocabulary of dance. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Fine Arts degree with a major in dance. May be repeated for credit when the topics vary.

#### T D 303. Fundamentals of Acting.

Not open to theatre and dance majors. Basic principles of acting and practical work in scenes from plays. Three lecture hours a week for one semester. Theatre and Dance 303 and 313C may not both be counted.

#### T D 303C (TCCN: DRAM 2336). Training the Speaking Voice.

Not open to theatre and dance majors. Fundamental principles of vocal production and speech. Three lecture hours a week for one semester.

#### T D 303V. Acting for Voice Performance Majors I.

Fundamental inquiry into the acting process. Three lecture hours a week for one semester. Prerequisite: A major in voice performance in the Butler School of Music.

#### T D 303W. Acting for Voice Performance Majors II.

Techniques for playing and shaping action within scene structures. Three lecture hours a week for one semester. Prerequisite: Theatre and Dance 303V.

#### T D 306. Introduction to Improvisational Drama.

General introduction to improvisational activities with application to the theatre. Three lecture hours a week for one semester.

#### T D 311. Languages of the Stage.

Introduction to the ways that performance communicates meaning, as a foundation for further study in theatre and dance. Three lecture hours a week for one semester. Prerequisite: A major in the Department of Theatre and Dance or consent of instructor.

#### T D 111T, 211T, 311T. Introductory Topics in Theatre and Dance.

Restricted to theatre and dance majors. Introductory topics in theatre and dance, including basic research methods, contemporary and local performance, the role of the artist in society, the philosophy of a fine arts education, and the exploration of campus resources. For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary.

#### T D 112. Freshman Movement and Physical Conditioning.

Principles and techniques of physical conditioning. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

#### T D 312C (TCCN: DANC 1345, DANC 1346). Contemporary Dance Technique.

Intensive study of principles, technique, and vocabulary of contemporary dance. Six laboratory hours a week for one semester.

May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

**T D 312D (TCCN: DANC 2345, DANC 2346). Intermediate Contemporary Dance Technique.**

Intensive study of intermediate-level theory, technique, and vocabulary of contemporary dance. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

**T D 312F (TCCN: DANC 1341, DANC 1342). Ballet Technique.**

Intensive study of principles, technique, and vocabulary of ballet. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

**T D 312G (TCCN: DANC 2341, DANC 2342). Intermediate Ballet Technique.**

Study of intermediate-level theory, technique, and vocabulary of ballet as a supporting style. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

**T D 312M. Movement Improvisation.**

Exploration and study of elements of movement design. Three hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance.

**T D 312N. Movement Composition.**

Continuation of Theatre and Dance 312M. Three hours a week for one semester, with additional laboratory hours as required. Prerequisite: Theatre and Dance 312M or consent of instructor.

**T D 112P, 212P, 312P. Fundamental Projects in Dance Performance and Repertory.**

Preparation and performance laboratory related to production. At least six laboratory hours a week for one semester; additional laboratory hours may be required for rehearsals and performances. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

**T D 112T, 212T, 312T. Topics in Dance Technique.**

For each semester hour of credit earned, at least one lecture hour a week for one semester, and additional laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

**T D 313C (TCCN: DRAM 1351). Acting I.**

Fundamental inquiry into the acting process; improvisational approaches to the playing of dramatic action. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance.

**T D 313D (TCCN: DRAM 1352). Acting II.**

Fundamental techniques of character analysis and portrayal. Introduction of published text. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance, and Theatre and Dance 313C.

**T D 313E (TCCN: DRAM 2351). Acting III.**

Personalization of character explored through various theatrical styles. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance, and Theatre and Dance 313D.

**T D 113P, 213P, 313P. Projects in Acting and Directing.**

Preparation and performance laboratory related to production. For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Consent of the acting/directing faculty.

**T D 314C (TCCN: DRAM 1330). Design for Performance.**

Introduction to the techniques, practices, and processes in costume, lighting, scenic, and sound design. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance.

**T D 314M (TCCN: DRAM 2331). Technical Theatre.**

Introduction to the techniques, practices, and processes in technical theatre. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: A major in the Department of Theatre and Dance.

**T D 314P (TCCN: DRAM 1320). Production Laboratory.**

Three hours a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance; and Theatre and Dance 314M, except for dance majors in the BFA degree program.

**T D 315. Playwriting I.**

The study and practice of writing plays. Three lecture hours a week for one semester.

**T D 317C (TCCN: DRAM 2361). Theatre History through the Eighteenth Century.**

Three lecture hours a week for one semester. Prerequisite: For theatre and dance majors, Theatre and Dance 311; for others, none.

**T D 317D (TCCN: DRAM 2362). Theatre History since the Eighteenth Century.**

Three lecture hours a week for one semester. Prerequisite: For theatre and dance majors, Theatre and Dance 311; for others, none.

**T D 317M. Dance History I.**

An exploration of world dance as an expression of cultural identity and change. Three lecture hours a week for one semester. Prerequisite: Theatre and Dance 311.

**T D 317N. Dance History II.**

Continuation of Theatre and Dance 317M. Three lecture hours a week for one semester. Prerequisite: Theatre and Dance 317M.

**T D 119Q, 219Q, 319Q, 419Q, 519Q, 619Q, 719Q, 819Q, 919Q. Topics in Theatre and Dance.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Theatre and Dance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work



in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### **T D 121P, 221P, 321P. Festival Project and Production.**

Students initiate, develop, and/or participate in an approved departmental major festival project or production under the supervision of a faculty member. For each semester hour of credit earned, at least one lecture hour a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit. Prerequisite: Consent of instructor.

### **T D 322. Dance Pedagogy.**

Techniques and materials used in the teaching of dance. Two lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Upper-division standing and consent of instructor.

### **T D 322C. Contemporary Dance Technique.**

Intensive study of principles, technique, and vocabulary of contemporary dance. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Fine Arts degree with a major in dance. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 322D. Intermediate Contemporary Dance Technique.**

Intensive study of intermediate-level theory, technique, and vocabulary of contemporary dance. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Fine Arts degree with a major in dance. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 322E. Advanced Contemporary Dance Technique.**

Intensive study of advanced theory, technique, and style of contemporary dance. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 322F. Ballet Technique.**

Intensive study of principles, technique, and vocabulary of ballet. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Fine Arts degree with a major in dance. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 322G. Intermediate Ballet Technique.**

Study of intermediate-level theory, technique, and vocabulary of ballet as a supporting style. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Fine Arts degree with a major in dance. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 322J. Advanced Ballet Technique.**

Study of advanced theory, technique, and vocabulary of ballet as a supporting style. Six laboratory hours a week for one semester. May be repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 122P, 222P, 322P. Projects in Dance Performance and Repertory.**

Preparation and performance laboratory related to production. At least six laboratory hours a week for one semester; additional laboratory hours may be required for rehearsals and performances. May be

repeated for credit. Prerequisite: A major in the Department of Theatre and Dance and consent of the dance faculty.

### **T D 323C. Directing I.**

Study and practice of the fundamentals of stage directing: composition, picturization, movement, gesture, and unit structure. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing and a major in the Department of Theatre and Dance.

### **T D 323D. Directing II.**

Dramatic and environmental analysis of full-length plays. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Theatre and Dance 323C.

### **T D 323E. Directing III.**

Theory and techniques of play directing, with practical applications in projects and scenes. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing, Theatre and Dance 323D, and consent of instructor.

### **T D 123P, 223P, 323P. Advanced Projects in Acting and Directing.**

For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of the acting/directing faculty.

### **T D 324. Design and Technology for Performance.**

Exploration of aspects of design and technology in performance, including costume, lighting, scenery, and sound. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit. Prerequisite: Theatre and Dance 314C, 314M, and consent of instructor.

### **T D 124P, 224P, 324P. Advanced Production Laboratory.**

One, two, or three hours a week for one semester, with additional laboratory hours to be arranged. May be repeated for credit. Prerequisite: Two semesters of Theatre and Dance 314P, and a major in the Department of Theatre and Dance or consent of instructor.

### **T D 325. Playwriting II.**

Emphasis on the form and writing of the full-length play or equivalent. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Theatre and Dance 315, and consent of instructor.

### **T D 125P, 225P, 325P. Projects in Playwriting.**

For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **T D 326. Dramatic Activities for the Classroom.**

Theory, materials, and practice, including story dramatization, storytelling, puppets, pantomime, shadow plays, role-playing, and theatre games. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing.

### **T D 326C. Theatre Studies: Creative Drama.**

Theory and practice of creative drama for children, both as an art form and as a process for emphasizing creative expression and aesthetic growth. Three lecture hours a week for one semester, with laboratory

hours as required. Prerequisite: Upper-division standing and consent of instructor.

**T D 326D. Theatre Studies: Theatre for Young Audiences.**

Theory and practice of all phases of play production for young audiences. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing.

**T D 326E. Theatre Studies: Directing the Young Performer.**

Introduction to the theory and practice of directing and producing theatre with young performers, with emphasis on appropriate literature. Three lecture hours a week for one semester, with laboratory hours as required. Prerequisite: Upper-division standing, Theatre and Dance 323C, concurrent enrollment in Theatre and Dance 226P, and consent of instructor.

**T D 126P, 226P, 326P. Projects in Theatre Studies.**

For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

**T D 127P, 227P, 327P. Projects in History, Criticism, and Performance Studies.**

For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

**T D 129Q, 229Q, 329Q, 429Q, 529Q, 629Q, 729Q, 829Q, 929Q. Topics in Theatre and Dance.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Theatre and Dance. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**T D 332M. Choreography.**

Advanced study of the principles and practices of choreography. Three hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 312N, and consent of instructor.

**T D 332N. Choreography: Design for Dance and Movement Theatre.**

Continuation of Theatre and Dance 332M. Three hours a week for one semester, with additional laboratory hours as required. May be repeated for credit. Prerequisite: Theatre and Dance 332M.

**T D 232P, 332P. Advanced Projects in Dance Performance and Repertory I.**

For 232P, at least six laboratory hours a week for one semester, with additional hours as required; for 332P, at least seven laboratory hours a week for one semester, with additional hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 222P, a major in the Department of Theatre and Dance, and consent of the dance faculty.

**T D 232Q, 332Q. Advanced Projects in Dance Performance and Repertory II.**

For 232Q, at least six laboratory hours a week for one semester, with additional laboratory hours as required; for 332Q, at least seven laboratory hours a week for one semester, with additional hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 232P or 332P, a major in the Department of Theatre and Dance, and consent of the dance faculty.

**T D 332R. Dance Pedagogy Theory.**

Principles, techniques, and materials used in the teaching of dance. Three lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, a major in the Department of Theatre and Dance, and consent of the dance faculty.

**T D 332S. Dance Pedagogy Practicum.**

Practical application techniques and materials used in the teaching of dance. Four and one-half laboratory hours a week for one semester, with additional hours as required. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 332R, a major in the Department of Theatre and Dance, and consent of the dance faculty.

**T D 351S. Seminar in Theatre and Dance.**

Three lecture hours a week for one semester. Prerequisite: Completion of at least ninety semester hours of coursework, a major in the Department of Theatre and Dance, and consent of instructor.

**T D 151T, 251T, 351T. Topics in Theatre and Dance.**

For each semester hour of credit earned, the equivalent of one class hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**T D 352. Experiential Anatomy.**

Principles and techniques of physical conditioning with practical applications to injury prevention for dance and theatre practitioners. Six laboratory hours a week for one semester, with additional hours to be arranged. May be repeated for credit. Prerequisite: Upper-division standing, Theatre and Dance 232P (or 332P), a major in the Department of Theatre and Dance, and consent of the dance faculty.

**T D 152P, 252P, 352P. Projects in Dance Movement Studies.**

For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

**T D 152T, 252T, 352T. Topics in Dance and Movement.**

For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**T D 353T. Topics in Acting and Directing.**

Topics in acting (including voice/speech and movement) and directing. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, a major in the Department of Theatre and

Dance, and Theatre and Dance 313E with a grade of at least B or consent of the acting/directing faculty.

**Topic 1: Latin American Theatre and Drama.** Same as Latin American Studies 322 (Topic 13: Latin American Theatre and Drama).

**T D 154P, 254P, 354P. Projects in Design and Technology.**

Individual projects in theatre design and technology. For each semester hour of credit earned, at least one hour a week for one semester and additional laboratory hours as required. May be repeated for credit. Prerequisite: Consent of instructor.

**T D 354T. Topics in Design and Technology.**

Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

**Topic 1: Costume and Makeup Crafts.**

**Topic 2: Fabric Painting and Dyeing.** Fundamentals of textile surface design.

**Topic 3: Mask Making.** Fundamentals of mask theory, design, and construction for theatre and live performance.

**Topic 4: Millinery.** Fundamentals of hat design, fitting, and construction techniques.

**Topic 5: Scenery Technology I.**

**Topic 6: Costume Rendering.**

**Topic 7: Drawing for Theatre Designers.**

**Topic 8: Painting.**

**Topic 9: Automated Lighting I.** Fundamentals of automated and computer-aided lighting for theatre and live performance.

**Topic 10: Costume Design Skills.** Fundamentals of research, drawing, rendering, and script/character analysis and critique for costume design.

**Topic 11: Lighting Design Skills.** Fundamentals of research, paperwork communication, and technology for lighting designers.

**Topic 12: Scenery Design Skills.** Fundamentals of drawing, drafting, and model building for theatrical designers.

**Topic 13: Stage Makeup.** Designed to familiarize students with the tools and products used by professional makeup artists. Includes techniques for natural, character, and special effects makeup in theatre, opera, dance, film, and television.

**Topic 14: Figure and Fabric Rendering.** Principles of figure and fabric painting from life.

**Topic 15: Scene Painting.** Scene painting techniques for theatrical designers.

**Topic 16: Automated Lighting II.** Advanced automated and computer-aided lighting theory and techniques.

**T D 355T. Topics in Playwriting.**

Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**T D 356T. Topics in Theatre Studies.**

Topics in theatre studies, including creative drama, theatre for children and youth, and theatre with young adults. Three lecture hours a week for one semester, with laboratory hours as required. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Puppetry.**

**T D 357T. Topics in History, Criticism, and Performance Studies.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

# John A. and Katherine G. Jackson School of Geosciences

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Sharon Mosher, PhD, *Dean*  
Phil Bennett, PhD, *Associate Dean, Academic Affairs*  
<http://www.jsg.utexas.edu/>

## General Information

### Mission

As civilization enters an era of increasing challenge, it is imperative that leaders, professionals, and citizens be well educated, competently and realistically able to address issues of local to global scope. With regard to the origin, history, structure, and processes of the planet Earth, and the use and management of its resources, the John A. and Katherine G. Jackson School of Geosciences aims to provide such an education. The objective of every natural science, including geological sciences, is to understand the realm of physical nature. Geological sciences, or geosciences, is a synthetic subject that examines the Earth through such traditional subdisciplines as geophysics, hydrogeology, paleontology, petrology, stratigraphy, and structural geology. Geoscientists also draw upon discoveries from mathematics, geography, archaeology, engineering, and the other sciences to meld an approach that is interdisciplinary, yet uniquely geological.

The need for well-educated geoscientists in industry, government, and education promises a bright future for geoscience professionals in the coming decades. As the human population expands, it is essential to develop sufficient resources and to maintain a livable environment. Geoscientists understand the dynamics of the Earth and its systems—the occurrence of natural resources and the diverse time scales of natural and human-induced change.

Every university seeks to enrich the education of its student body generally. Study of geosciences enhances a liberal arts or arts and sciences education. Geosciences uses experiments and observations to explore origins and processes, whether of the Earth itself, of geologic phenomena, or of the history of life. It operates in the conventional three dimensions of space and in the fourth dimension of deep geologic time. Both in the laboratory and in the field, it examines the Earth on all scales, from atomic nuclei, to a hand sample of rock, to an entire landscape, to continents and oceans, to the planet as a whole.

### Financial Assistance Available through the School

Through the Geology Foundation, the Jackson School makes available to its students a number of scholarship funds established by individuals, foundations, and industrial or research organizations. Scholarships are awarded entirely on the basis of academic performance and standing. Grants, when available, may be awarded on the basis of demonstrated financial need, without regard to grade point average. Information is available from the Undergraduate Student Services Office. The Geology Foundation also offers a student emergency loan program, and students may seek additional assistance through the University's Office of Student Financial Services.

## Student Services

### Academic Advising

The Undergraduate Student Services Office and faculty members advise students in the Jackson School, including those not seeking a degree in geological sciences and those who have not yet selected a major.

Academic advising begins after the twelfth class day in the fall and spring semesters and after the fourth class day in the summer session. Students are encouraged to meet with an adviser as early as possible, because procrastination may prevent their timely registration.

### Career Services

The Jackson School offers career planning and job placement assistance for students. The Career Services staff offers interview tips and can help with career planning, résumé writing, job search techniques, and business and professional etiquette.

Career Services also helps Jackson School graduates and students about to graduate seek full-time or part-time jobs and internships. The staff posts job opportunities throughout the year and hosts recruiters who offer information sessions as well as on-campus interviews each fall and spring. The Career Services office also offers résumé referral for students and employers. The Jackson School of Geosciences Career Fair, which brings students and employers together every fall, provides another forum for geosciences students to learn about different career opportunities.

Career services for students who plan to teach are provided by Education Career Services in the College of Education and by UTeach-Natural Sciences.

Career Services and the Undergraduate Student Services Office can help students choose majors and careers, find internships, and plan for employment or graduate study. However, the University makes no guarantee to secure employment for each graduate.

## Admission and Registration

### Admission

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information* (<http://registrar.utexas.edu/catalogs>).

Students admitted to the University with deficiencies in high school units must remove the deficiencies as prescribed in *General Information*.

### Admission to the Environmental Science Program

All new freshmen and transfer students are admitted to the University as entry-level environmental science majors and later seek admission to one of the three majors offered in the degree program by the Jackson School of Geosciences, College of Liberal Arts, and the College of Natural Sciences.



To apply for the Bachelor of Science in Environmental Science Geological Sciences major in the Jackson School of Geosciences, the student must be an entry-level environmental science major who has met the following requirements:

1. Completion of Biology 311C, Chemistry 301, and Mathematics 408C or 408N with a grade of at least C- in each course
2. Completion of Geological Sciences 401 or 303 with a grade of at least B-

To be competitive for admission, the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall. Students whose applications are denied may reapply through the supplemental admission process. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the Jackson School of Geosciences Undergraduate Student Services Office for information about the application process and application deadlines.

More information about the degree program is given in Bachelor of Science in Environmental Science (p. 269).

## Registration

*General Information* gives information about registration, adding and dropping courses, transferring from one division of the University to another, and auditing a course. The *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), published before registration for each semester and summer session, contains registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

## Academic Policies and Procedures

### Minimum Scholastic Requirements

The student must earn a cumulative grade point average of at least 2.00 in all courses taken at the University of Texas at Austin (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded. In addition, the student must earn a grade point average of at least 2.00 in geological sciences courses taken at the University and counted toward the major requirement.

The student must earn a grade of at least C- in each semester of each course used to fulfill any of the requirements for the degree.

For more information about grades and the grade point average, see *General Information* (<http://registrar.utexas.edu/catalogs/>).

### Repetition of a Course

A student may not enroll in any course in the Jackson School more than twice, even if the course is needed to meet degree requirements, without first obtaining written consent in the Undergraduate Student

Services Office. The symbol Q or W counts as an enrollment unless it has been approved by the Undergraduate Student Services Office for nonacademic reasons.

## Honors

University-wide honors are described in Honors (p. 17) and in *General Information*. Students who meet the following requirements may also graduate with departmental honors.

### School Honors Program

The Jackson School offers a departmental honors program to its majors. Minimum requirements for the completion of this program are

1. A cumulative University grade point average of at least 3.00, and a grade point average in geological sciences of at least 3.50
2. Geological Sciences 171H, 172H, and 173H with a grade of at least B- in each
3. Geological Sciences 379H, *Honors Tutorial*, with a grade of at least B-
4. Completion at the University of at least sixty semester hours of coursework counted toward the degree

The statement "Special Honors in Geological Sciences" appears on the transcript of each student certified as having completed the honors program.

Students who wish to participate in the program should apply to the departmental honors adviser when they have completed sixty semester hours of coursework, including at least twelve semester hours of upper-division coursework in geological sciences.

## Graduation

### Special Requirements of the School

All students must fulfill the general requirements (p. 18) for graduation. Students in the Jackson School must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts in Geological Sciences, these sixty hours must include at least eighteen hours in geological sciences.
2. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Options I, II, and III of the BSGeoSci require at least eighteen hours of upper-division coursework in geological sciences to be completed in residence; option V requires at least twelve hours. (Option IV: Environmental Science and Sustainability is no longer offered.)
3. An Air Force, Army, or Naval Reserve Officer Training Corps (ROTC) student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the student's government contract is completed or the student is released from the ROTC.

## Applying for Graduation

An electronic degree audit is created for each student each semester; the student should view the audit through IDA, the University's Interactive Degree Audit system. The degree audit tells the student the courses he or she must take and the requirements he or she must fulfill to receive the degree. Although the degree audit normally provides an accurate statement of requirements, the student is responsible for knowing and meeting the requirements of the degree as stated in a catalog under which he or she is eligible to graduate (see rules on graduation under a particular catalog (p. 19)). If in doubt about any requirement, the student should seek an official ruling in the Undergraduate Student Services Office before registering.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file a graduation application form in the Undergraduate Student Services Office. This should be done during the first week of classes, if possible, and certainly no later than the deadline published in the academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

## Degrees and Programs

### Degrees

The Jackson School offers the Bachelor of Arts in Geological Sciences, the Bachelor of Science in Environmental Science, the Bachelor of Science in Geological Sciences, and, in partnership with the Cockrell School of Engineering, the Bachelor of Science in Geosystems Engineering and Hydrogeology. Whichever degree they pursue, geological sciences students must take courses in the Jackson School, the College of Natural Sciences, and the College of Liberal Arts. These units work together to meet students' individual needs and to ensure that they receive a superior education.

### Programs

The University and the Jackson School offer the following programs to supplement the degree plans mentioned above.

### Undergraduate Research

The University offers an opportunity for undergraduates to participate in state-of-the-art research, for University credit, with eminent scientists. If qualified, the student may also earn special departmental honors for exceptional research and may receive recognition through participation in the Bridging Disciplines Programs (p. 25), or the annual Undergraduate Research Forum sponsored by the College of Natural Sciences. Additional information about undergraduate research is available from the Jackson School Undergraduate Student Services Office.

### Certificate in Computational Science and Engineering

For information about this transcript-recognized certificate, see Certificate in Computational Science and Engineering (p. 15). The Jackson School sponsors this program along with the Cockrell School of Engineering, the College of Liberal Arts, and the College of Natural Sciences.

## U-Teach Natural Sciences

The Jackson School participates in UTeach-Natural Sciences, an innovative teacher preparation program offered by the Colleges of Natural Sciences and Education that allows students to pursue middle grades and secondary school teacher certification within a four-year mathematics, science, or computer science degree program. While learning the subject matter of their majors, students also learn how to teach. Upon completing the program, students graduate with a bachelor's degree and are recommended for a middle grades or secondary school teaching certificate. The UTeach-Natural Sciences program invites students to explore their interest in teaching as early as the freshman year. Through courses taught by some of Texas's most respected secondary school math and science teachers, students learn quickly whether they are suited to the profession.

A description of the UTeach-Natural Sciences curriculum is given in UTeach-Natural Sciences (p. 486); more information is available at the UTeach-Natural Sciences Office. In the Jackson School, the BSGeoSci, Option V: Teaching, prepares students to seek teacher certification.

## Program Assessment Activities

Students in the Jackson School are required to participate in assessment activities related to maintaining accreditation with the Southern Association of Colleges and Schools, in addition to their required coursework. Students are exempted from participation only in extenuating circumstances and with the prior approval of the undergraduate faculty adviser and the Undergraduate Student Services Office.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity (PED) courses and Kinesiology 119 may not be counted toward a degree in the Jackson School. However, they are counted as courses for which the student is enrolled, and the grades are included in the grade point average.

### ROTC Courses

The Departments of Air Force Science, Military Science, and Naval Science maintain ROTC units on campus. Information about each program is available from the chair of the department concerned.

Nine semester hours of coursework in air force science, military science, or naval science may be counted toward any degree in the Jackson School. Such credit may be used only as electives or to fulfill the writing requirement, and only by students who are commissioned by the University ROTC program.

## Correspondence and Extension Courses

Concurrent enrollment is enrollment simultaneously at the University and at another educational institution or in University Extension. During a long-session semester students in the Jackson School enrolled at the University are not allowed to take courses at another school or institution or by correspondence or extension at the University unless specifically approved in advance by the Dean. Exceptions are considered on a case by case basis after the student meets with their academic advisor and submits a Concurrent Enrollment Petition to the Undergraduate Student Services Office in advance. Exceptions to this

policy for math and science courses are considered only in extremely rare circumstances. No more than 30 percent of the semester hours required for any degree in the Jackson School may be completed online with by correspondence or University Extension.

## Bible Courses

No more than twelve semester hours of Bible courses may be counted toward a degree.

## Bachelor of Arts in Geological Sciences

The Bachelor of Arts in Geological Sciences (BAGeoSci) is a classical arts and sciences degree that gives students a great deal of flexibility in their choice of upper-division geological sciences courses. Students must complete courses in the natural sciences, the social and behavioral sciences, and the humanities. This diversity of subjects provides an opportunity to learn about basic differences in outlook among different disciplines, the ways questions are raised and answered, and the ways the answers are validated and made relevant in practical use. The Bachelor of Arts in Geological Sciences also provides for a minor made up of four courses in another field, including two upper-division courses. These choices let students combine their interests in liberal arts and geosciences to prepare for professions such as business, journalism, resource management, public policy, law, and medicine.

Another option for outstanding students interested in geology is the Bachelor of Arts, Plan II, offered by the College of Liberal Arts. This broad liberal arts honors program emphasizes the humanities but also permits a concentration in science that is equivalent to a major. The BA, Plan II, is described in Bachelor of Arts, Plan II (p. 309). Students who plan to become professional geoscientists should pursue one of the BSGeoSci degree options.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including eighteen hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. As long as these residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the semester hours required for the degree), or, with the approval of the dean, by work transferred from another institution.

The coursework counted toward the degree may include no more than thirty-six hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences; and no more than thirty-six hours in any other single college or school of the University, including the Jackson School.

No coursework to be counted toward the degree may be taken on the pass/fail basis.

All students must complete the University's core curriculum (p. 22). The specific requirements for the Bachelor of Arts in Geological Sciences consist of prescribed work, major and minor requirements, and electives. In addition, the student must fulfill the University general requirements (p. 18), and the requirements of the Jackson School given in special requirements of the college (p. 266).

## Prescribed Work

1. *Writing*: Two courses that carry a writing flag. Courses with a writing flag are identified in the *Course Schedule*, registrar.utexas.edu/schedules/. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language*: Four semesters, or the equivalent, in a single foreign language. The foreign language requirement is the attainment of a certain proficiency, rather than the completion of a specified number of hours. Any part of the requirement may be fulfilled by credit by examination. To achieve proficiency in a foreign language as rapidly as possible, qualified students are urged to take intensive foreign language courses. Information about these courses is available from the departments that offer them. Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.
3. *Social science*: Three semester hours in social science, in addition to the course counted toward the social and behavioral sciences requirement of the core curriculum. The course must be chosen from the following fields; it must be in a different field from the course used to fulfill the core curriculum social and behavioral sciences requirement.
  - A. Anthropology
  - B. Economics
  - C. Geography
  - D. Linguistics
  - E. Psychology
  - F. Sociology
4. *Natural science*: Six semester hours in natural sciences, in addition to the courses counted toward the science and technology requirements of the core curriculum. Courses must be chosen from the following fields; no more than three hours may be in either the history of science or the philosophy of science.
  - A. Astronomy
  - B. Biology
  - C. Chemistry
  - D. Marine science
  - E. Nutrition
  - F. Physical science
  - G. Physics
  - H. Mathematics
  - I. Computer science
  - J. Experimental psychology
  - K. Physical anthropology
  - L. Physical geography
  - M. Philosophy (courses in logic)
  - N. History of science and philosophy of science
  - O. Other fields approved by the dean
5. *General culture*: Three semester hours in addition to the course counted toward the visual and performing arts requirement of the core curriculum. Courses in the following fields may be used:
  - A. Architecture
  - B. Classical civilization, Greek, Latin

- C. Art history, design, ensemble, fine arts, instruments, music, studio art, theatre and dance, visual art studies
- D. Philosophy (excluding courses in logic)
- E. Approved interdisciplinary courses including, but not limited to, those in programs of special concentration cutting across specific departments, schools, or colleges. Lists of approved courses are available in the Undergraduate Student Services Office.

## The BA Major and Minor

With the exception of courses that carry a writing flag, a course taken to fulfill the requirements under "Prescribed Work" above may not also be counted toward fulfillment of the major and minor requirements.

## Residence Requirements for the Major

At least eighteen semester hours of coursework in geological sciences, including six hours of upper-division coursework, must be completed in residence at the University.

## Course Requirements for the Major

Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K, and enough additional upper-division coursework in geological sciences to make a total of thirty-two semester hours; six semester hours in biology; Chemistry 301 and 302; and three semester hours in physics.

## Minor

Twelve semester hours, of which at least six must be in upper-division coursework, in any one of the following disciplines: anthropology, astronomy, biology, business, computer science, chemistry, education, engineering, geography, mathematics, and physics. Other disciplines may be chosen with submission and approval of a petition through the Undergraduate Student Services Office.

## Electives

In addition to the core curriculum, the prescribed work, and the major and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve semester hours of Bible and no more than nine hours of air force science, military science, or naval science.

## Bachelor of Science in Environmental Science

The Bachelor of Science in Environmental Science degree program, offered by the College of Liberal Arts, the College of Natural Sciences, and the Jackson School, is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; to perform field, laboratory, and computer analyses; and to conduct original research. The program is designed to prepare graduates for careers

in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School with a major in geological sciences, by the College of Liberal Arts with a major in geographical sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given in Admission to the Environmental Science Program (p. 265).

The BSEnviroSci curriculum consists of 126 semester hours of coursework. All students must complete the University's core curriculum (p. 22). The specific degree requirements consist of prescribed work and major requirements. In some cases, a course that is required for the degree may also be counted toward the core curriculum.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

## Prescribed Work

1. *Mathematics*: Mathematics 408C, or 408N and 408S
2. *Chemistry*: Chemistry 301 or 301H; 302 or 302H; and 204
3. *Physics*: Physics 317K and 117M, or another four-hour calculus-based physics sequence
4. *Biological sciences*: Biology 311C and 311D, or 315H
5. *Ecology*: Biology 373 and 373L, or Marine Science 320 and either 120L or 152T (Topic: Marine Ecology)
6. *Geological sciences*: Geological Sciences 401 or 303, 346C, and an approved geological sciences course in sustainability
7. *Geography*: Geography 335N
8. *Field experience*: One course in each of the following areas:
  - A. Introductory field seminar: Environmental Science 311
  - B. Senior field/research experience: Environmental Science 371, Biology 377 (with prior approval of the faculty adviser), 478T
9. *Research methods*: Environmental Science 331
10. *Environmental and sustainability themes*: One course in each of the following thematic areas:
  - A. *Environmental and sustainability policy, ethics, and history*: Geography 334, 336C, 340D, 342C, 356C, 356T (approved topics), Philosophy 325C
  - B. *Geographic information systems*: Geography 360G, 462K, Geological Sciences 327G
  - C. *Climates and oceans*: Biology 456L, Geography 333K, 356T (approved topics), Geological Sciences 371C (approved topics), 377P, Marine Science 320, 440, 354Q, 354T, 367K



D. *Environmental economics, sustainability, and business:*  
Economics 304K, 330T

11. Environmental Science 141 and 151

Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10c.

## Major Requirements

The following thirty-six semester hours of coursework are required; these hours must include at least twelve hours of approved upper-division work in geological sciences.

1. Geological Sciences 404C or 405, 416K, 416M and 420K
2. Mathematics 408D or 408M
3. Four semester hours of physics in one of the following second-semester sequences: Physics 316 and 116L, 317L and 117N, 303L and 103N
4. One of the following courses on climate and water: Geological Sciences 371C (approved topics), 376E, 476K, 476M, 376S, 377P (The same course may not be used to satisfy both requirement 4 of the major requirements and requirement 10 of the prescribed work.)
5. Nine semester hours of upper-division elective coursework in geological sciences
6. Two courses that carry a writing flag (One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule*, <http://registrar.utexas.edu/schedules/>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.)
7. Enough additional coursework to make a total of 126 semester hours.

## Special Requirements

Students must fulfill the University-wide General Requirements (p. 18) and the Special Requirements (p. 266) of the Jackson School given earlier in this section. They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

## Bachelor of Science in Geological Sciences

The Bachelor of Science in Geological Sciences (BSGeoSci) serves as a professional degree for students planning careers as geologists, geophysicists, or teachers, as well as for those planning to pursue graduate work in the geosciences or a profession such as law or business. Careers are available in the petroleum and related energy industries, resource evaluation, mineral exploration, geologic hazard monitoring, environmental control and reclamation, building foundation evaluation, groundwater contamination studies, soil testing, regional planning, watershed management, climate modeling, and college or secondary school teaching. Graduates may also work in state or

federal agencies, in universities or museums, with consulting firms, or with service companies to the energy and mineral industries.

A plan of study for the Bachelor of Science in Geological Sciences includes courses required by the University and required and elective courses in geological sciences (preceded by their prerequisite courses). Taken together, these courses make up an option, a degree plan with a particular concentration or emphasis. Thus, individuals may develop intellectually challenging yet quite different plans of study according to their personal interests and goals. Students seeking the Bachelor of Science in Geological Sciences degree must choose one of four options--I: General Geology, II: Geophysics, III: Hydrogeology, V: Teaching. (Option IV: Environmental Science and Sustainability is no longer offered.)

In addition to the prescribed work outlined below, all students must complete the University's core curriculum (p. 22). In some cases, a course that is required for the BSGeoSci may also be counted toward the core curriculum; these courses are identified below.

## Prescribed Work Common to All Options

1. Two courses that carry a writing flag. Courses with a writing flag are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Courses 506 and 507 (or the equivalent) in a single foreign language, or as much of this coursework as required by the student's score on the appropriate language placement test. Students in the teaching option must fulfill a different foreign language requirement, given with the other option requirements below.  
For students who enter the University with fewer than two high school units in a single foreign language, the first two semesters in a language may not be counted toward the total number of semester hours required for the degree.
3. Thirty-six semester hours of upper-division coursework must be completed in residence at the University. For students in options I, II, and III, at least eighteen of these hours must be in geological sciences; for students in option V, at least twelve hours must be in geological sciences. (Option IV: Environmental Science and Sustainability is no longer offered.) For all students, at least twelve of the thirty-six hours must be outside geological sciences.

## Option I: General Geology

1. Mathematics 408C and 408D, or 408K, 408L, and 408M. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 316, and 116L; or Physics 303K, 103M, 303L, and 103N.

3. Chemistry 301, 302, and 204. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum.
4. Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K, 426P, 428, 660 (completed in residence), and enough additional approved upper-division coursework in geological sciences to make a total of fifty-two semester hours.
5. Twelve semester hours chosen from a list of approved courses in aerospace engineering, architectural engineering, astronomy, biology, chemical engineering, chemistry, civil engineering, computer science, engineering mechanics, geography, marine science, mathematics, mechanical engineering, petroleum and geosystems engineering, and physics. Geological Sciences 325K may also be counted toward requirement 5.

This requirement is intended to function as an unspecified minor. Courses used to fulfill the requirement do not have to be taken in the same field of study, but they should form a self-reinforcing sequence related to geological sciences. Courses not on the list of approved courses will be considered upon petition to the undergraduate faculty adviser.

6. Enough additional coursework to make a total of 126 semester hours.

## Option II: Geophysics

1. Mathematics 408C and 408D, or 408K, 408L, and 408M; 427K; and 427L. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 315, 115L, 316, and 116L.
3. Chemistry 301 and 302. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum.
4. Geological Sciences 325J, *Programming in FORTRAN and MATLAB*.
5. Geological Sciences 401 or 303, 416K, 416M, 420K, 325K, 428, 354, 465K, 366M, six hours in approved field/research courses, and three additional hours of approved upper-division coursework in geological sciences. The field/research requirement may be met by several courses, including Geological Sciences 348K, 660, 376L, 679G, and approved off-campus geophysics field courses.
6. Six semester hours of technical electives chosen from a list of approved coursework in mathematics, physics, computer science, engineering, and related fields. A list of approved courses is available in the undergraduate advising office. Technical elective credit for courses not on the approved list may be requested by petition. These courses will be added to the list after geophysics faculty review and approval.
7. Enough additional coursework to make a total of 126 semester hours.

## Option III: Hydrogeology

1. Mathematics 408C and 408D, or 408K, 408L, and 408M; and 427K. Mathematics 408C or 408K also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
2. Physics 301, 101L, 316, and 116L; or Physics 303K, 103M, 303L, and 103N.
3. Chemistry 301, 302, and 204.
4. Biology 311C. Together, the courses that meet requirements 2 and 3 also meet parts I and II of the science and technology requirement of the core curriculum; Biology 311C may also be used to meet part II of that requirement.
5. The following coursework in geological sciences:
  - A. Geological Sciences 401 or 303, 416K, 416M, 420K, 428, 476K, 476M, and 376S
  - B. Six semester hours of field experience which must include Geological Sciences 376L and three additional hours selected from one of the following: Geological Sciences 660A, 660B, or 679J, or other appropriate course approved in advance by the Undergraduate Adviser
  - C. Three upper-division semester hours in hydrogeology or a related area, chosen from Geological Sciences 325K, 376E, 377P, 327G, or other approved course
  - D. Nine additional semester hours of upper-division coursework in geological sciences
6. Six semester hours chosen from a list of approved courses in biology, chemistry, civil engineering, geography, marine science, mathematics, mechanical engineering, and petroleum and geosystems engineering.

This requirement is intended to function as an unspecified minor. Courses used to fulfill the requirement do not have to be taken in the same field of study, but they should form a self-reinforcing sequence related to geological sciences. Courses not on the list of approved courses will be considered upon petition to the undergraduate faculty adviser.

7. Enough additional coursework to make a total of 126 semester hours.

## Option V: Teaching

This option is designed to fulfill the course requirements for composite science certification as a middle grades or secondary school teacher in Texas with geological sciences as the primary teaching field; composite certification requires twenty-four semester hours of coursework in the primary field, twelve hours in a second field, and six hours each in two additional fields.

Completion of the required courses does not guarantee teacher certification. To graduate and be recommended for certification, the student must have a cumulative University grade point average of at least 2.50 and must pass the final teaching portfolio review.

Information about the portfolio review and additional certification requirements is available from the UTeach-Natural Sciences academic adviser.

1. In place of the foreign language requirement above, either two years of high school coursework in a single foreign language or course 506 (or the equivalent) in a foreign language.
2. Mathematics 408C. This course also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward the total number of semester hours required for the degree. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 without degree credit to remove their deficiency.
3. History 329U or Philosophy 329U.
4. Geological Sciences 401 or 303, 404C or 405, 416K, 416M, 420K or 320L, 335, and enough additional upper-division coursework in geological sciences to make a total of at least twenty-eight semester hours.
5. To meet the requirements of composite certification, the student must complete the following courses. In meeting this requirement, the student also fulfills parts I and II of the science and technology requirement of the core curriculum.
  - A. Biology 311C and 311D
  - B. Chemistry 301 and 302
  - C. Physics 302K, 102M, 302L, and 102N; or 301, 101L, 316, and 116L; or an equivalent sequence
  - D. Enough additional approved coursework in biology, chemistry, or physics to provide the required twelve semester hours in a second field
6. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic 1: *Research Methods: UTeach*), or Physics 341 (Topic 7: *Research Methods: UTeach*).
7. Astronomy 303, 307, or 367M; and Marine Science 307.
8. Eighteen semester hours of professional development coursework, with a grade of at least C in each course: Curriculum and Instruction 650S, UTeach-Natural Sciences 101, 110, 350, 355, 360, 170.
9. For students seeking middle grades certification, the following coursework with a grade of at least C in each course: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
10. Enough additional coursework to make a total of 128 semester hours.

## Bachelor of Science in Geosystems Engineering and Hydrogeology

Geosystems engineers and hydrogeologists are concerned with the development and use of engineering approaches in the management of natural resources from the Earth's surface and subsurface, environmental restoration of subsurface sites, and other processes related to the earth sciences. This degree program, offered in

partnership by the Cockrell School of Engineering and the Jackson School, is designed to teach students the geological and engineering principles needed to solve subsurface resource development and environmental problems. The curriculum includes a fundamental sequence of engineering and geological sciences courses in such areas as multiphase fluid flow, physical and chemical hydrology, heat and mass transfer, field methods, and engineering design. This interdisciplinary systems approach, combining engineering and geological sciences, is increasingly required to address complex real-world problems such as characterization and remediation of aquifers. The degree program is designed to prepare graduates for employment with environmental, water resource management, and energy companies in addition to many government agencies. Better-qualified graduates of the program may pursue graduate study in subsurface environmental engineering, petroleum engineering, geology, and related fields.

The objective of the degree program is to prepare graduates for successful careers in subsurface environmental engineering (including carbon dioxide sequestration), oil and gas production and services, and similar fields. Graduates are expected to understand the fundamental principles of science and engineering behind the technology of geosystems engineering and hydrogeology, so that their education will not become outdated and so that they will be capable of self-instruction after graduation. They should also be prepared to serve society by applying the ideals of ethical behavior, professionalism, and environmentally responsible stewardship of natural resources.

Containing the following elements, the technical curriculum provides both breadth and depth in a range of topics:

- A combination of college-level mathematics and basic sciences (some with experimental work) that includes mathematics through differential equations, physics, chemistry, and geology
- Basic engineering and geologic topics that develop a working knowledge of fluid mechanics, strength of materials, transport phenomena, material properties, phase behavior, and thermodynamics
- Engineering and geosciences topics that develop competence in characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods, including field methods; design and analysis of systems for producing, injecting, and handling fluids; application of hydrogeologic and reservoir engineering principles and practices for water and energy resource development and management; contamination evaluation and remediation methods for hydrologic resources; and use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty
- A major capstone design experience that prepares students for engineering and hydrogeologic practice, based on the knowledge and skills acquired in earlier coursework and incorporating engineering and geological standards and realistic constraints
- A general education component that complements the technical content of the curriculum

## Curriculum

Course requirements are divided into three categories: basic sequence courses, major sequence courses, and other required courses. In addition, each student must complete the University's core curriculum (p. 22). In some cases, a course required as part of the basic sequence may also be counted toward the core curriculum; these courses are identified below. To ensure that courses used to fulfill

the social and behavioral sciences and visual and performing arts requirements of the core curriculum also meet ABET criteria, students should follow the guidance given in ABET Criteria (p. 156).

In the process of fulfilling the following degree requirements, students must also complete a course that carries an independent inquiry flag, a course that carries a quantitative reasoning flag, and two courses that carry a writing flag. The independent inquiry flag, the quantitative reasoning flag, and one writing flag are provided by courses specifically required for the degree; these courses are identified below. Students are advised to fulfill the second writing flag requirement with a course that meets another requirement of the core curriculum, such as the first-year signature course. Courses that may be used to fulfill flag requirements are identified in the *Course Schedule*, registrar.utexas.edu/schedules/. More information about flags is given at Skills and Experiences Flags (p. 24).

Enrollment in major sequence courses is restricted to students who have received credit for all of the basic sequence courses and have been admitted to the major sequence. Requirements for admission to a major sequence are given in Admission to a Major Sequence (p. 150). Enrollment in other required courses is not restricted by completion of the basic sequence.

Courses used to fulfill nontechnical elective requirements must be approved by the petroleum and geosystems engineering faculty and the geological sciences faculty before the student registers for them.

Students must fulfill the Foreign Language Requirement (p. 24). They must also remove any admission deficiencies in mathematics as described in *General Information* (<http://catalog.utexas.edu/general-information>). A suggested arrangement of courses by semester is given in Suggested Arrangement of Courses (p. 180).

Courses	Sem Hrs
<b>Basic Sequence Courses</b>	
• Chemistry 301, 302 (Chemistry 301 may be used to fulfill part II of the science and technology requirement of the core curriculum.)	6
• Engineering Mechanics 306, 319	6
• Geological Sciences 303, 416K, 416M	11
• Mathematics 408C, 408D, 427K (Mathematics 408C may be used to fulfill the mathematics requirement of the core curriculum; Mathematics 408C and 427K each carry a quantitative reasoning flag.)	12
• Petroleum and Geosystems Engineering 310, 312, 322K, 333T (Petroleum and Geosystems Engineering 333T carries a writing flag.)	12
• Physics 303K, 303L, 103M, 103N (Physics 303K and 303L may be used to fulfill part I of the science and technology requirement of the core curriculum; both courses carry a quantitative reasoning flag.)	8
• Rhetoric and Writing 306 (May be counted toward the English composition requirement of the core curriculum.)	3
• Undergraduate Studies 302 or 303 (May be used to fulfill the first-year signature course requirement of the core curriculum; some sections carry a writing flag.)	3
	<b>Total 61</b>

**Major Sequence Courses**

• Geological Sciences 420K, 428, 468K, 476K, 376L, 376S	22
• Petroleum and Geosystems Engineering 323K, 323L, 323M, 424, 326, 365, 368, 373L	25
• Civil Engineering 357	3

**Total 50**

**Remaining Core Curriculum Courses**

• English 316K (humanities)	3
• American and Texas government	6
• American history	6
• Visual and performing arts	3
• Social and behavioral sciences	3

**Total 21**

**Minimum required 132**

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule*, registrar.utexas.edu/schedules/, to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Environmental Science: EVS

### Lower-Division Courses

#### EVS 311. Field Seminar in Sustainability.

Designed for students pursuing a Bachelor of Science in Environmental Science. Introduces field observation and analysis of environmental processes and sustainability issues. Topics include ecology, hydrogeology, marine science, climate science, energy, and campus sustainability. Two lecture hours and four laboratory or field laboratory hours a week for one semester. Prerequisite: Consent of instructor.

### Upper-Division Courses

#### EVS 331. Research Methods for the Environmental Sciences.

Designed for students pursuing a Bachelor of Science in Environmental Science. Topics include experimental design, statistical analysis and modeling, and ethics. Students develop and conduct an independent research project during the laboratory portion of the



course. Two lecture hours and four laboratory or field laboratory hours a week for one semester. Prerequisite: Environmental Science 311 with a grade of at least C-, and consent of instructor.

#### **EVS 141. Environmental Science Professionalism I.**

Examines the fundamental, nontechnical aspects of environmental science and sustainability practices through the use of case studies and projects that use interdisciplinary approaches. Subjects may include the importance of interdisciplinary collaboration in addressing and assessing environmental science processes, the development of professional opportunities across disciplines, understanding professional responsibilities, applying ethical principles, the balance of multidisciplinary demands in professional practice, and the need for lifelong learning. One lecture hour a week for one semester. Prerequisite: Senior standing, Environmental Science 311 and 331, and admission to an environmental science major.

#### **EVS 151. Environmental Science Professionalism II.**

Examines the fundamental, nontechnical aspects of environmental science and sustainability practices. Focuses on the use of interdisciplinary communication for addressing and assessing environmental science processes, the challenges posed by communicating across disciplines, the development of professional communication and public speaking skills, effective presentation of research, the ethics and practices of peer research review, and effective communication of the effects of environmental science in a global society. One lecture hour a week for one semester. Prerequisite: Environmental Science 141.

#### **EVS 171, 271, 371, 471. Research Experience.**

Designed for students pursuing a Bachelor of Science in Environmental Science. Supervised study of selected topics in environmental science, by individual arrangement with the instructor. Conference course. May not be substituted for any required environmental sciences course. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

## **Geological Sciences: GEO**

### **Lower-Division Courses**

#### **GEO 401 (TCCN: GEOL 1403). Physical Geology.**

Nature, properties, and distribution of crustal materials; surficial processes; internal processes; origin of continents, oceans, and ocean basins; mineral and fuel resources. Three lecture hours and two hours of laboratory or fieldwork a week for one semester. Only one of the following may be counted: Geological Sciences 401, 303, 312K, 420H.

#### **GEO 302C. Climate: Past, Present, and Future.**

Designed for nonscience majors. Principal factors that determine Earth's climate, evidence of climate change, causes of climate change, natural climatic variations and human-induced changes, prediction of climate in the next one hundred years, and uncertainties in climate prediction. Three lecture hours and one and one-half laboratory hours a week for one semester.

#### **GEO 302D. Age of Dinosaurs.**

An exploration of the general principles of natural history, focusing on the natural history of dinosaurs. An introduction to the basics of geology, anatomy, paleontology, and evolutionary theory, followed by the application of this knowledge, in tracing the evolutionary history of Dinosauria. Three lecture hours and one and one-half laboratory hours

a week for one semester. Normally offered in the fall semester only. May not be counted toward a degree in geological sciences.

#### **GEO 302E. Earth, Wind, and Fire.**

Designed for nonscience majors. Geologic phenomena that affect everyday life, including global warming, earthquakes, volcanism, desertification, river and coastline flooding and erosion, groundwater, mineral resources, and plate tectonics. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the fall semester only. May not be counted toward a degree in geological sciences.

#### **GEO 302K (TCCN: GEOL 1301, GEOL 1302). Selected Topics in Geological Sciences.**

Designed for nonscience majors. The impact of geological processes on human activity; geologic topics of popular interest. Three lecture hours and one and one-half laboratory hours a week for one semester. May not be counted toward a degree in geological sciences. May be repeated for credit when the topics vary.

#### **GEO 302M. The Age of Mammals.**

Introductory-level course on paleontology and natural history for nonscience majors. Basic geological processes, fossilization, and the fossil record. Overview of the "tree of life." Summary of the evolution and diversification of mammals, an introduction to interactions between physical and biological processes, and the impact of climate change and human activities on mammalian communities. Laboratory component focuses on the mammalian skeleton and common Texas mammals. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the spring semester only. May not be counted toward a degree in geological sciences.

#### **GEO 302P. Sustaining a Planet.**

Restricted to freshmen and sophomores. Examines sustainability and the environment from the perspective of multiple disciplines. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the spring semester only. May not be counted toward a degree in geological sciences.

#### **GEO 303. Introduction to Geology.**

Mineral and rock composition of the earth; measurement of geologic time; origin and evolution of life; earth's interior; plate tectonics; depositional environments and processes; ancient climates; humans, earth resources, and the environment. Two lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Geological Sciences 401, 303, 312K, 420H.

#### **GEO 303C. Introduction to the Solar System.**

Examines the origin and evolution of our solar system; how processes such as volcanism and impacts have shaped planet surfaces, as well as the workings of planetary interiors; the unique properties of Earth that allowed life to arise and evolve; the prospects for seeking life on other planets in our own solar system and beyond; and the history of planetary exploration and the methods scientists use to explore fundamental questions regarding our place in the universe. Three lecture hours a week for one semester. Geological Sciences 303C and 310C (Topic: Introduction to the Solar System) may not both be counted.

#### **GEO 404C. Plate Tectonics and Earth History.**

Application of plate tectonics to the origin and history of Earth's crust and the origin, evolution, and distribution of living organisms. Three lecture hours and two laboratory hours a week for one semester.

Normally offered in the spring semester only. Geological Sciences 404C and 405 may not both be counted. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-.

#### **GEO 405 (TCCN: GEOL 1404). Life through Time.**

The history and development of life, and the processes of change from the early Precambrian era to the present. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Geological Sciences 404C and 405 may not both be counted. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-.

#### **GEO 305E. Energy and the Environment.**

A survey of all forms of current and potential sources of energy, and how these might impact the earth's environment. Three lecture hours and one and one-half laboratory hours a week for one semester. May not be counted toward a degree in geological sciences, geosystems engineering and hydrogeology, or petroleum engineering.

#### **GEO 306P. Geology and Sustainability.**

Restricted to environmental science majors. Examines sustainability and environmental science from an interdisciplinary perspective. Three lecture hours and one and one-half laboratory hours a week for one semester. Normally offered in the fall semester. Prerequisite: Written consent of instructor.

#### **GEO 307 (TCCN: GEOL 1345). Introduction to Oceanography.**

Same as Marine Sciences 307. Introduction to the sciences of oceanography: geological, physical, and biological. Two lecture hours and two laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts degree with a major in geological sciences, the Bachelor of Science in Geological Sciences (Option I), the Bachelor of Science in Geological Sciences (Option II), or the Bachelor of Science in Geological Sciences (Option III).

#### **GEO 110C, 210C, 310C. Conference Course.**

Supervised study of selected topics in geological sciences, by individual arrangement with the department and the instructor. Conference course. May not be substituted for any required geological sciences course. Some topics are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

#### **GEO 211. Emerging Scholars in Geological Sciences.**

Introduction to research areas in the geological sciences, with emphasis on the skills needed for success in graduate school and the professional workplace. Four laboratory hours a week for one semester. Offered irregularly. May not be substituted for any required geological sciences course. Offered on the pass/fail basis only. Prerequisite: Written consent of instructor.

#### **GEO 114G. Geophysics Colloquium.**

Open to non-geological sciences majors, but registration priority is given to geological sciences majors. Exploration of a variety of problems in modern geophysics. Two lecture hours a week for one semester, and at least one weekend field trip. Geological Sciences 110C (Topic: Geophysics Colloquium) and 114G may not both be counted. May be repeated for credit. Offered on the pass/fail basis only.

#### **GEO 416K. Earth Materials.**

Introduction to minerals, mineral study techniques, igneous and metamorphic rocks and ore deposits, and formation processes. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Geological Sciences 401 or 303 with a grade of at least C-, Chemistry 301 with a grade of at least C-, and credit with a grade of at least C- or registration for Chemistry 302.

#### **GEO 416M. Sedimentary Rocks.**

Restricted to majors in the Jackson School of Geological Sciences. Description and interpretation of sedimentary rocks in hand specimen and thin section; characteristics of sedimentary rocks deposited in different environments. Three lecture hours and four laboratory hours a week for one semester, with two additional one-day field trips to be arranged. Prerequisite: Geological Sciences 401, 303, or 420H with a grade of at least C-.

#### **GEO 316P. Sedimentary Rocks.**

Not open to geological sciences majors. Examines the fundamentals of sedimentary rocks, including siliciclastic grain parameters and mineralogy, sediment transport and sedimentary structures; and carbonate mineralogy and geochemistry, grain and matrix constituents, modern facies, and classification. Reviews the principal siliciclastic and carbonate depositional systems, their process of formation and facies architecture and the role of process and architecture in petrophysical patterns, distribution of permeability and porosity, flow units, reservoir, heterogeneities, and hydrocarbon recovery. Three lecture hours a week for one semester. Normally offered in the spring semester. May not be counted toward any degree in geological sciences. Prerequisite: Geological Sciences 401, 303, or 420H with a grade of at least C-.

#### **GEO 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Geological Sciences.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad office. Credit is recorded as assigned by the study abroad adviser in the Department of Geological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **GEO 420F. Classic Geology in Scotland.**

Introduction to the founding concepts of geology. Students use advanced field technologies while studying the geology of Scotland on all scales of size. The equivalent of four lecture hours a week for one semester, including field exercises in a variety of geological settings. Prerequisite: Geological Sciences 401, 303, or other coursework in geology.

#### **GEO 420H. Honors Introductory Geology.**

An accelerated introductory course on the composition, structure, and history of the earth. Three lecture hours and two laboratory hours a week for one semester, and several all-day field trips. Normally offered in the fall semester only. Only one of the following may be counted: Geological Sciences 401, 303, 312K, 420H. Prerequisite: Consent of instructor.

### **GEO 420K. Introduction to Field and Stratigraphic Methods.**

For geological sciences majors. Field observation of geological processes and study of the mineralogy, petrology, stratigraphy, paleontology, and structural geology of central Texas. Two lecture hours and three laboratory hours a week for one semester, and six weekend field trips. Geological Sciences 420K and 320L may not both be counted. Prerequisite: Geological Sciences 416K and 416M with a grade of at least C- in each.

### **GEO 320L. Introductory Field Geology.**

Study of geologic features and processes in the field, designed for nongeologists; emphasizes regional geology of central Texas and techniques of geologic mapping. The equivalent of three lecture hours a week for one semester. Normally offered between the spring semester and the summer session only. Geological Sciences 420K and 320L may not both be counted. May not be counted toward the Bachelor of Arts in Geological Sciences or the following options within the Bachelor of Science in Geological Sciences: general geology, geophysics, hydrogeology, environmental science and sustainability. Offered on the pass/fail basis only. Prerequisite: Geological Sciences 401 or 303 or consent of instructor.

### **GEO 422K. Paleobiology.**

Systematics, biostratigraphy, paleoecology, and evolution of fossil organisms. Three lecture hours and four laboratory hours a week for one semester, with two additional one-day field trips. Normally offered in the fall semester only. Prerequisite: Biology 301M or 311D with a grade of at least C-, Geological Sciences 404C or 405 with a grade of at least C-, and Geological Sciences 416M with a grade of at least C-.

### **GEO 322S. Development and Evolution of the Vertebrate Skeleton.**

Designed for majors in geological sciences and associated fields of natural history. Introduction to the organization and development of the vertebrate skeleton; survey of vertebrate history. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only, in alternate years. Prerequisite: Upper-division standing.

### **GEO 322V. Morphology of the Vertebrate Skeleton.**

Identification of skeletal elements from the major vertebrate taxa, and aspects of skeletal functional morphology, with emphasis on extant taxa. Topics include the skeletal systems of fish, amphibians, reptiles, birds, and mammals. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the fall semester only, in alternate years. Geological Sciences 322V and 389R may not both be counted. Prerequisite: One of the following: Geological Sciences 404C, 405, or the equivalent, or three semester hours of coursework in biology, or consent of instructor.

### **GEO 325J. Programming in FORTRAN and MATLAB.**

Restricted to geosciences majors. FORTRAN for students without knowledge of a computer programming language: survey of all variable types, loops, arrays, subroutines, and functions; overview of UNIX and MATLAB. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Mathematics 408D or the equivalent.

### **GEO 325K. Computational Methods.**

Sampling and aliasing. Review of sinusoids and wave terminology, complex numbers and complex sinusoids, vectors and matrices, the discrete Fourier transform, convolution, the convolution theorem, linear

digital filters and transfer functions, random variable concepts and statistics, and least squares estimation. MATLAB is used for homework problems and examples. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Geological Sciences 325J, or an equivalent college-level course in an appropriate programming language and consent of instructor.

### **GEO 426P. Igneous and Metamorphic Petrology.**

Mineralogy, geochemistry, and processes of magmatism and metamorphism. Three lecture hours and four laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 416K with a grade of at least C-, and credit with a grade of at least C- or registration for either Physics 301 and 101L or 303K and 103M.

### **GEO 327G. Geographic Information System and Global Positioning System Applications in Earth Sciences.**

For geological sciences majors only. Theory and practice of geographic information system (GIS) and Global Positioning System (GPS) technologies, and their applications to problems in earth sciences. Laboratories and field trips provide hands-on experience with the collection, mapping, and analysis of geologic and other field data using GPS equipment and GIS software. Topics include map projections; datums and reference frames; cartographic principles; remotely sensed data (satellite and aerial photos, image radar); vector- and raster-based image formats; geospatial data resources; GIS software applications; surveying principles; GPS constellation and data structure; differential GPS; data logging schemes; GPS postprocessing software; integration of GPS and GIS in mapmaking; extant GIS applications in geology and hydrogeology. Three lecture hours and two laboratory hours a week for one semester, and two weekend field trips. Geological Sciences 327G and 371C (Topic: Geographic Information System and Global Positioning System Applications in Earth Sciences) may not both be counted. Prerequisite: Geological Sciences 420K with a grade of at least C-, and consent of instructor.

### **GEO 428. Structural Geology.**

Description, classification, and origin of Earth structures. Solution of problems by descriptive geometry, geologic maps, and contouring. Three lecture hours and three laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: For students pursuing the Bachelor of Science in Geological Sciences, Geological Sciences 420K with a grade of at least C-, Physics 301 and 101L or 303K and 103M with a grade of at least C- in each, and credit with a grade of at least C- or registration for Mathematics 408C or 408K (or 308K); for those pursuing the Bachelor of Arts with a major in geological sciences, Geological Sciences 420K with a grade of at least C-, three semester hours of coursework in mathematics (other than Mathematics 301, 316K, and 316L) with a grade of at least C-, and Physics 302K or 303K with a grade of at least C-; for others, consent of instructor.

### **GEO 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Geological Sciences.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Geological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.



### **GEO 329W. Hydrogeology Cooperative (Geological Sciences).**

This course covers the work period of geological sciences students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. The student must submit a final report to the supervising instructor at the conclusion of the program. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application to become a member of the Hydrogeology Cooperative (Geological Sciences) Program and consent of the geological sciences undergraduate adviser.

### **GEO 330K. Energy Exploration.**

Covers the fundamental elements of the petroleum system, including the origin of source rocks and reservoirs, rock properties, migration of hydrocarbons, and correlation methods for rock formations. During the final weeks of the course, students form exploration teams and work up real subsurface data from the Gulf of Mexico in order to participate in a simulated lease sale. Two lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester. Prerequisite: Geological Sciences 416M with a grade of at least C-, and Physics 303L or 316.

### **GEO 331K. Petrology and Plate Tectonics.**

Sedimentation, metamorphism, igneous activity, and deformation patterns at rift zones, subduction zones, and transform margins. Three lecture hours a week for one semester. Offered irregularly, as shown in the Course Schedule. Prerequisite: Geological Sciences 428 with a grade of at least C-.

### **GEO 335. Geology and Mineral Resources of Texas.**

Geologic history of the region; local rocks, fossils, and mineral resources; influence of physiography, surface and subsurface water supplies, and energy and mineral resource production on the state economy. Three lecture hours and two laboratory hours a week for one semester; local field trips may also be required. Normally offered in the fall semester only. May not be counted toward the following options within the Bachelor of Science in Geological Sciences: general geology, geophysics, and hydrogeology. May not be counted toward a degree in environmental science. Prerequisite: Upper-division standing, Geological Sciences 401 or 303, and Geological Sciences 404C or 405.

### **GEO 338T. Marine Tectonics.**

Tectonic processes within the dynamic Earth, with a focus on oceanic structures. Subjects may include fundamentals of plate tectonics; plate motion, driving forces, and mantle convection; evolution of triple junction and plate margins; plate reconstructions; earthquakes and focal mechanisms; structure and geochemistry of the Earth's interior; mantle structure and tomography; rheology and deformation mechanisms in mantle and crust; heat flow, gravity, the geoid, and paleomagnetism; hotspots and mantle plumes; seafloor spreading and oceanic spreading ridges; oceanic transform faults and fracture zones; and subduction zones, volcanic island arcs, and marginal seas. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 338T, 371C (Topic: Tectonics I), 381T, 391 (Topic: Tectonics I). May not be substituted for any required geological sciences course.

Prerequisite: Upper-division standing, and Geological Sciences 428 with a grade of at least C- or consent of instructor.

### **GEO 339T. Continental Tectonics.**

Tectonic processes, with a focus on continental lithospheric structures. Subjects may include convergent margins, subduction zones, magmatic arcs, and foreland structures; collisional orogenesis, arc-continent collisions, continent-continent collision, and mountain building; formation of supercontinents; uplift and exhumation; orogenic collapse and extensional tectonics; continental rifting and passive margins; transform margins; and the effect of tectonics on climate and oceanic circulation. Three lecture hours a week for one semester. Normally offered in the fall semester only. Only one of the following may be counted: Geological Sciences 339T, 371C (Topic: Tectonics II), 382T, 391 (Topic: Tectonics II). May not be substituted for any required geological sciences course. Prerequisite: For geological sciences majors, upper-division standing and Geological Sciences 428 with a grade of at least C-; for others, consent of instructor.

### **GEO 340T. Geoclimatology.**

Examination of the climate records encoded in sedimentary archives through geologic time. Three lecture hours a week for one semester. May not be substituted for any required geological sciences course. Geological Sciences 340T and 371C (Topic: Geoclimatology) may not both be counted. Prerequisite: For geological sciences majors, upper-division standing, and Chemistry 302 and Geological Sciences 416K and 416M with a grade of at least C- in each; for others, upper-division standing, Chemistry 302 and Geological Sciences 416K and 416M with a grade of at least C- in each, and consent of instructor.

### **GEO 341. Mineral Resources, Society, and the Environment.**

Nature and origin of mineral resources; their discovery, extraction, and uses; and their relationship to global history, economics, and the environment. Three lecture hours and one laboratory hour a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 416K with a grade of at least C-.

### **GEO 341G. Geomicrobiology.**

Geologic and hydrologic controls on subsurface microbial growth, metabolism, and community structure; the geochemical consequences of microbial processes in subsurface settings; and the influence of geology on microbial ecology. Three lecture hours a week for one semester. Normally offered in the fall semester only, in alternate years. May not be substituted for any required geological sciences course. Geological Sciences 341G and 381G may not both be counted. Prerequisite: For geological sciences majors, upper-division standing; for others, upper-division standing and consent of instructor.

### **GEO 344K. Marine Mining and Minerals.**

Same as Marine Sciences 344K. Overview of seafloor mineral deposits, their exploration and mining. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Geological Sciences degree. Prerequisite: Geological Sciences 401 or 303, 416K, and 416M.

### **GEO 344U. Quantitative Seismic Interpretation.**

Seismic inversion, a tool for reservoir characterization, post- and pre-stack modeling, rock physics and fluid replacement modeling, wavelet estimation and post-stack inversion, AVO and pre-stack inversion, multiattribute regression and neural network, and net pay estimation. Extensive hands-on training with three-dimensional seismic and well-log data. Three lecture hours a week for one semester. Normally



offered in the spring semester only, in alternate years. Prerequisite: Upper-division standing.

### **GEO 346C. Introduction to Physical and Chemical Hydrogeology.**

Basic concepts of fluid flow, surface and subsurface hydrology, aqueous geochemistry, and fluid-rock interaction. Additional topics include isotope hydrogeology, evolution of seawater, and mineral-solution equilibrium. Three lecture hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Chemistry 302 with a grade of at least C-.

### **GEO 347G. Climate System Modeling.**

Studies the basic theory of climate system modeling using state-of-the-art regional climate models in a variety of applications. Subjects may include paleoclimate study and future climate prediction based on greenhouse gas increases. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 347G, 371C (Topic: Climate System Modeling), 387G, 391 (Topic: Climate System Modeling). May not be substituted for any required geological sciences course. Prerequisite: Upper-division standing, basic knowledge of Unix, and programming experience in Fortran.

### **GEO 347K. Gems and Gem Minerals.**

Crystallography, occurrence, and identification of gem minerals and materials; artificial gems; simple cutting and polishing; history of gems and gemology. Three lecture hours and two laboratory hours a week for one semester. May not be counted toward a degree in geological sciences or environmental science. Prerequisite: For earth science teachers, consent of instructor; for others, Geological Sciences 401 or 303, and Chemistry 301 or one year of high school chemistry.

### **GEO 347P. Climate System Physics.**

Discussion of first-order principles and processes that govern the thermodynamical structure and energy distribution of the atmosphere, ocean, land, and cryosphere and their interaction with the dynamic aspect of the climate system. Three lecture hours a week for one semester. Normally offered in the spring semester only. Only one of the following may be counted: Geological Sciences 347P, 371C (Topic: Climate System Physics), 387P, 391 (Topic: Climate System Physics). May not be substituted for any required geological sciences course. Prerequisite: Upper-division standing and Mathematics 408D and Physics 303K with a grade of at least C- in each.

### **GEO 348K. Marine Geology and Geophysics Field Course.**

Same as Marine Sciences 348 (Topic 2: Marine Geology and Geophysics Field Course). Hands-on, team-based instruction in the collection and processing of marine geological and geophysical data along the Gulf of Mexico coast. Includes classroom, laboratory, and field components in Austin and at sea. Offered between the spring semester and the summer session; limited class meetings may begin in the spring semester. Geological Sciences 348K and 397F may not both be counted. Fulfills the field experience requirement for some geological sciences degree programs. Students should contact the department for information before registering. Prerequisite: For geological sciences majors, upper-division standing, Geological Sciences 420K or 320L with a grade of at least C-, and consent of instructor; Geological Sciences 416M and 465K are recommended; for others, upper-division standing, Marine Sciences 307 and 354F with a grade of at least C- in each, and consent of instructor.

### **GEO 354. Physics of Earth.**

How history, composition, temperature, kinematics, and dynamics of Earth are inferred from geophysical observations of all types. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 354 and 384D may not both be counted. Prerequisite: For students in the geophysics option, Geological Sciences 465K and 365P; for others, a major in geological sciences and completion of the calculus and physics courses required for the major.

### **GEO 358K. Volcanology.**

Ash deposits, lava flows, eruption processes; prediction and mitigation of volcanic hazards. Three lecture hours and one laboratory hour a week for one semester. Offered irregularly. Prerequisite: Geological Sciences 426P or upper-division standing in geological sciences.

### **GEO 660. Field Geology.**

Methods of geologic mapping with topographic maps and aerial photographs. Field studies include measuring sections, interpretation of stratigraphy, structure, environments of deposition of various sedimentary rocks, and the origin and petrology of igneous and metamorphic rocks. Given for six weeks each summer in Colorado, New Mexico, and other western states. Normally offered in the summer session only. Prerequisite: Eighteen semester hours of coursework in geological sciences, including Geological Sciences 420K and 428 with a grade of at least C- in each.

### **GEO 661. Geophysics Field Camp.**

Field studies for geophysics majors, including seismic, magnetic, electrical, gravity, and other techniques; related data processing and interpretation. Each half requires three consecutive weeks of fieldwork. Geological Sciences 661A is offered either between the spring semester and the summer session or in the summer session; Geological Sciences 661B is offered in the summer session. Students may take Geological Sciences 661 for University credit while enrolled in the Los Alamos National Laboratory SAGE program. Prerequisite: Completion of eighteen semester hours of coursework in geological sciences, including Geological Sciences 420K, 465K, and 365P with a grade of at least C- in each.

### **GEO 465K. Seismic Exploration.**

Seismic theory, including body and surface waves, attenuation, rays, reflection and transmission coefficients, principles of synthetic seismogram calculations, seismic imaging principles, reflection data processing methods, rock physics overview, seismic attributes overview, and seismic exploration field methods. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 427L and Physics 315 and 115L.

### **GEO 365N. Geophysical Data Processing.**

Fourier transforms of continuous functions, linear digital filter design and applications, frequency domain filtering, and spectral analysis and applications. Three lecture hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 325K or the equivalent.

### **GEO 365P. Potential Field Applications in Geophysics.**

Introduction to the theory, measurement, and application of gravity and magnetic and electric fields to exploration and global-scale problems. Three lecture hours a week for one semester. Normally offered in the spring semester only. Geological Sciences 365P and 383P may not

both be counted. Prerequisite: Mathematics 427K, 427L, Physics 315, and 115L with a grade of at least C- in each.

### **GEO 365Q. Geomorphology Process and Form.**

Explores how Earth surface processes combine to shape landscapes through erosion and deposition. Includes discussion of open channel flow, sediment transport, fluvial and hillslope processes, and tectonic controls on landscape evolution. Three lecture hours a week for one semester, with several field trips to be arranged. Normally offered in the fall semester. Only one of the following may be counted: Geological Sciences 365Q, 371C (Topic: Geomorphology: Landscape Process, Form, and Evolution), 385Q, 391 (Topic: Geomorphology: Landscape Process, Form, and Evolution). May not be substituted for any required geological sciences course. Prerequisite: Upper-division standing; and Mathematics 408C or the equivalent, or consent of instructor.

### **GEO 366M. Mathematical Methods in Geophysics.**

A survey of mathematics for geoscientists that includes infinite series, complex variables, linear algebra, integral transforms, ordinary and partial differential equations, tensor analysis, and probability and statistics. Three lecture hours a week for one semester. Normally offered in the fall semester. Geological Sciences 366M and 380J may not both be counted. Prerequisite: Mathematics 427L or the equivalent.

### **GEO 468K. Geophysics for Geological Sciences Majors.**

A survey of seismic, magnetic, gravitational, and other geophysical tools and their application to exploration and global-scale problems. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. May not be counted toward the Bachelor of Science in Geological Sciences, Option II. Prerequisite: Mathematics 408D and either Physics 303L and 103N or 316 and 116L, with a grade of at least C- in each.

### **GEO 370K. Sedimentology.**

Processes of sediment formation, transportation, and deposition; textures, structures, and facies of sedimentary rocks. Three lecture hours a week for one semester, and two one-day field trips. Offered irregularly. Prerequisite: Geological Sciences 420K with a grade of at least C-.

### **GEO 171C, 271C, 371C. Conference Course.**

Supervised study of selected topics in geological sciences, by individual arrangement with the department and instructor. Conference course. May not be substituted for any required geological sciences course. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

### **GEO 171H. Research Methods.**

Preparation for independent research projects through exposure to current research programs, facilities, personnel, and projects in the Jackson School of Geosciences. Includes selecting research topics, mentors, and supervisors; preparing research proposals; conducting research activities; and presenting research results. The equivalent of one lecture hour a week for one semester. Prerequisite: Completion of sixty semester hours of college coursework, including at least eight hours of upper-division coursework in geological sciences; consent of the honors adviser; and admission to the Geological Sciences Honors Program or consent of instructor.

### **GEO 171T, 271T, 371T. Undergraduate Seminar in Geological Sciences.**

For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester; additional hours may be required for some topics. May not be substituted for any required geological sciences courses. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and a major in the Jackson School of Geosciences, or consent of instructor. Additional prerequisites may vary with the topic.

### **GEO 172H. Research Methods.**

Preparation for independent research projects through exposure to current research programs, facilities, personnel, and projects in the Jackson School of Geosciences. Includes selecting research topics, mentors, and supervisors; preparing research proposals; conducting research activities; and presenting research results. The equivalent of one lecture hour a week for one semester. Prerequisite: Geological Sciences 171H, and admission to the Geological Sciences Honors Program or consent of instructor.

### **GEO 173H. Research Methods.**

Preparation for independent research projects through exposure to current research programs, facilities, personnel, and projects in the Jackson School of Geosciences. Includes selecting research topics, mentors, and supervisors; preparing research proposals; conducting research activities; and presenting research results. The equivalent of one lecture hour a week for one semester. Prerequisite: Geological Sciences 171H and 172H, and admission to the Geological Sciences Honors Program or consent of instructor.

### **GEO 376E. Environmental Isotope Geochemistry.**

The application of the isotope and trace element geochemistry of natural waters and sediments to studies of the hydrologic cycle. Stable, radiogenic, and cosmogenic isotopes are used as tracers of the evolution of groundwater, surface water, and ocean water. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Offered irregularly. Prerequisite: Upper-division standing in geological sciences; and consent of instructor or the following courses: Chemistry 302, 204, Geological Sciences 416K, 416M, 346C, Mathematics 408D, and Physics 303L and 103N or 316 and 116L.

### **GEO 476K. Groundwater Hydrology.**

Introduction to subsurface hydrology, emphasizing geological controls on groundwater flow; quantitative methods of analyzing aquifer systems; regional hydrology; water quality and pollution. Three lecture hours and one laboratory hour a week for one semester, with several local field trips. Normally offered in the fall semester only. Prerequisite: Geological Sciences 346C or Mathematics 408D with a grade of at least C-, or consent of instructor.

### **GEO 376L. Field Methods in Groundwater Hydrology.**

Introduction to field methods, including geophysics, pump tests, stream gauging, well-logging, water sampling, and mapping. An intensive three-week course meeting eight hours a day, Monday through Friday, and four hours on Saturday: lectures, laboratory exercises, and field exercises; nightly homework involving map exercises, reduction of field data, report preparation; Saturdays devoted to report presentation, review sessions, and local field trips. Offered between the spring semester and the summer session. Prerequisite: Geological Sciences 476K with a grade of at least C-, or consent of instructor.

**GEO 476M. Chemical Hydrogeology.**

An introduction to aqueous geochemistry and contaminant hydrogeochemistry; topics include basic thermodynamics, kinetics, rock-water interactions, and solute transport. Three lecture hours and two laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Geological Sciences 346C, 476K, or 376S with a grade of at least C-.

**GEO 376S. Physical Hydrology.**

Modern conceptual and methodological approaches to hydrological science: qualitative assessment of hydrological processes, quantitative representation, approaches to measurement, and treatment of uncertainty. Major components of the hydrological cycle--precipitation, snow and snowmelt, infiltration, soil moisture, evapotranspiration, and runoff--and their link to the coupled-earth system. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Geological Sciences 346C or Mathematics 408D with a grade of at least C-.

**GEO 376T. High-Temperature Geochemistry.**

Restricted to geosciences majors. Study of the composition, origin, and chemical and physical evolution of the earth and its interior. Examines the links between the fields of geochemistry and tectonics, igneous petrology, geophysics, and other areas of inquiry. Three lecture hours a week for one semester. Normally offered in the fall semester only. Prerequisite: Mathematics 408D or the equivalent.

**GEO 377P. Physical Climatology.**

Investigates the nature of earth's climate and examines the physical processes that maintain the climate system. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Upper-division standing; and Mathematics 408D, Physics 303K, Geography 301K, and Computer Science 303E, or their equivalents.

**GEO 679G. Special Studies in Geophysics.**

Special research projects, field studies, or geophysical/industrial internship. Assigned reading with written and oral report. Three lecture hours a week for two semesters. May be used instead of Geological Sciences 660 in fulfilling the requirements for the Bachelor of Science in Geological Sciences (Option II). Prerequisite: A University grade point average of at least 3.00, or a grade point average in geosciences courses of at least 3.00 and consent of instructor.

**GEO 379H. Honors Tutorial.**

Supervised research project resulting in an honors thesis with an oral defense. Conference course. May be counted as three of the six geological sciences senior elective hours. Prerequisite: Upper-division standing, admission to the Geological Sciences Honors Program, and completion of Geological Sciences 171H, 172H, and 173H with a grade of at least B- in each; or consent of the departmental honors adviser.

**GEO 679J. Internship in Hydrogeology.**

Special hydrogeological studies under the joint supervision of industry professionals and faculty members. Students present a written report. Forty hours a week for one semester. May be used in place of Geological Sciences 660 in fulfilling the requirements for the Bachelor of Science in Geological Sciences (Option III). Prerequisite: Geological Sciences 476K with a grade of at least C-, a grade point average in geological sciences of at least 3.00, and consent of instructor.

**GEO 279K, 379K. Special Studies in Advanced Geological Sciences.**

Special emphasis on recent developments. Conference course. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of coursework in advanced geological sciences, a grade point average in geological sciences of at least 3.00, a University grade point average of at least 3.00, and consent of instructor.

**GEO 479M. Mammalogy.**

Surveys the biology and evolutionary history of mammals. Introduction to the diversity of living mammals through the study of mammalian ecology, behavior, morphology, and taxonomy. Laboratory work focuses on the characters diagnosing the major mammalian clades and identifying the common recent mammals of Texas using skins and recent osteological specimens. Fossils and the fossil record of mammals. Three lecture hours and three laboratory hours a week for one semester. Normally offered in the spring semester only. Prerequisite: Upper-division standing in biology, geological sciences, or anthropology.

# School of Information

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Andrew P. Dillon, *PhD, Dean*  
Philip Doty, *PhD, Associate Dean*  
Mary Carla Criner, *PhD, Assistant Dean*  
<http://www.ischool.utexas.edu/>

The School of Information offers the Master of Science in Information Studies and the Doctor of Philosophy. The *Graduate Catalog* provides information about these programs and the requirements for admission to graduate study.

In addition to the graduate courses described in the *Graduate Catalog* (<http://registrar.utexas.edu/catalogs>), the faculty has approval to offer the undergraduate courses listed below in the academic years 2012-2013 and 2013-2014. For undergraduates who are interested in a thorough introduction to information studies, the faculty has designed a curriculum that consists of at least four courses: two lower-division and two upper-division, including one required core course, for a total of at least twelve semester hours. Students who complete these requirements receive a certificate from the School of Information documenting their achievement. The curriculum is designed to complement many undergraduate degree programs; with the approval of his or her major college, a student may count the courses toward the requirements of the minor.

Not all courses are taught each semester and summer session. Students should consult the *Course Schedule* (<http://registrar.utexas.edu/schedules>), published at <http://registrar.utexas.edu/schedules/>, to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course; if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Information Studies: INF Lower-Division Courses

### INF 304D. Introduction to Information Studies.

Overview of the information field as it relates to the technology-based world culture. Topics may include the idea of information, information in relation to technology and culture, information technology in education, information literacy and the "digital divide," information and communication technology, information and gender, public information policy, and information organization and preservation. Three lecture hours a week for one semester. Information Studies 304D and 304W may not both be counted. Prerequisite: Lower-division standing.

### INF 304W. Introduction to Information Studies.

Overview of the information field as it relates to the technology-based world culture. Topics may include the idea of information, information in relation to technology and culture, information technology in education, information literacy and the "digital divide," information and communication technology, information and gender, public information policy, and information organization and preservation. Web-based instruction; no class meetings. Information Studies 304D and 304W may not both be counted. Prerequisite: Lower-division standing.

### INF 315E. Information and Culture.

Examines information as a cultural phenomenon. Topics may include e-commerce, privacy and secrecy, censorship, information as a commodity, Internet culture, access to cultural heritage, and control of the cultural record. Three lecture hours a week for one semester. Information Studies 315E and 315W may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

### INF 315W. Information and Culture.

Examines information as a cultural phenomenon. Topics may include e-commerce, privacy and secrecy, censorship, information as a commodity, Internet culture, access to cultural heritage, and control of the cultural record. Web-based instruction; no class meetings. Information Studies 315E and 315W may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

## Upper-Division Courses

### INF 322T. Children's Literature.

Evaluation, selection, and proper and creative use of books and other media with children. Three lecture hours a week for one semester. Information Studies 322T and 322W may not both be counted. Prerequisite: Upper-division standing.

### INF 322W. Children's Literature.

Evaluation, selection, and proper and creative use of books and other media with children. Web-based instruction; no class meetings. Information Studies 322T and 322W may not both be counted. Prerequisite: Upper-division standing.

### INF 327E. Information and People.

Study of how individuals and groups create meaning. Explores research topics concerning people and communication, including information literacy, organizations and innovation, knowledge management, and identifying information needs. Three lecture hours a week for one semester. Information Studies 327E and 327W may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### INF 327W. Information and People.

Study of how individuals and groups create meaning. Explores research topics concerning people and communication, including information literacy, organizations and innovation, knowledge management, and identifying information needs. Web-based instruction; no class meetings. Information Studies 327E and 327W may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### INF 331C. Beyond Google.

A general introduction to information searching and evaluating information in digital, print, visual, and aural formats. Three lecture hours a week for one semester. Information Studies 331C and 331W may not both be counted. Prerequisite: Upper-division standing.

### INF 331W. Beyond Google.

A general introduction to information searching and evaluating information in digital, print, visual, and aural formats. Web-based instruction; no class meetings. Information Studies 331C and 331W may not both be counted. Prerequisite: Upper-division standing.

### INF 335C. Information in Cyberspace.

An overview of the history and social impact of Internet, Web, and other network technologies. Students will learn methods and tools of



media creation with an emphasis on technological self-sufficiency. Three lecture hours a week for one semester, including some web-based instruction. Only one of the following may be counted: Information Studies 312, 335C, 335W. Prerequisite: Upper-division standing.

**INF 335W. Information in Cyberspace.**

An overview of the history and social impact of Internet, Web, and other network technologies. Students will learn methods and tools of media creation with an emphasis on technological self-sufficiency. Web-based instruction; no class meetings. Only one of the following may be counted: Information Studies 312, 335C, 335W. Prerequisite: Upper-division standing.

**INF 343C. Information Organization and Access.**

Basic aspects of representing and organizing information resources in digital information settings. Introduces the fundamentals of identifying informational objects, including description, content indication, and metadata. Three lecture hours a week for one semester. Information Studies 343C and 343W may not both be counted. Prerequisite: Upper-division standing.

**INF 343W. Information Organization and Access.**

Basic aspects of representing and organizing information resources in digital information settings. Introduces the fundamentals of identifying informational objects, including description, content indication, and metadata. Web-based instruction; no class meetings. Information Studies 343C and 343W may not both be counted. Prerequisite: Upper-division standing.

**INF 350E. Information Technology.**

Design and use of information technologies, including interface design, trends in information technology development, usability, information retrieval, immersive media, and information architecture. Three lecture hours a week for one semester. Information Studies 350E and 350W may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Technologies of the Book.** Additional prerequisite: Consent of the School of Information.

**INF 350G. Information in Society.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**INF 350W. Information Technology.**

Design and use of information technologies, including interface design, trends in information technology development, usability, information retrieval, immersive media, and information architecture. Web-based instruction; no class meetings. Information Studies 350E and 350W may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

# College of Liberal Arts

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Randy L. Diehl, PhD, *Dean*

Richard R. Flores, PhD, *Senior Associate Dean, Academic Affairs*

Esther L. Raizen, PhD, *Associate Dean, Research*

Marc A. Musick, PhD, *Associate Dean, Student Division*

James A. Southerland Jr., MPA, *Assistant Dean, Business Affairs*

Kathleen M. Aronson, PhD, *Assistant*

*Dean, Development and Alumni Relations*

Joseph TenBarge, BA, *Assistant Dean,*

*Information Technology and Facilities*

Kimberly Krieg, BS, *Assistant Dean, Student Division*

<http://www.utexas.edu/cola/>

## General Information

### Arts and Sciences Education

The academic program offered cooperatively by the College of Liberal Arts and the College of Natural Sciences provides what is sometimes referred to as a “liberal arts” or an “arts and sciences” education. No matter what area of knowledge a student intends to specialize in, the program of study will require courses in both colleges. The colleges work together to ensure that the individual interests and needs of the students pursuing an arts and sciences program are met.

Guidelines for developing a coherent plan of study are provided by major requirements, by sequential prerequisites, and by optional patterns of emphasis. Departmental majors, areas of specialization, and interdepartmental programs are designed to enable every student to study at least one field in depth. These programs are sufficiently broad in scope to allow students in the same major to develop quite different plans of study in pursuit of their individual interests and goals. Each student should choose courses that are intellectually challenging and that contribute to his or her long-term objectives.

Arts and sciences students are required to take a certain number of courses in the natural sciences, the social and behavioral sciences, and the humanities. Consequently, whatever their fields of study, they have the opportunity to learn something about the basic differences in the ways questions are raised and answered in several fields of inquiry, and about the techniques for validating the answers and putting the results to use. At the same time, they may gain some of the philosophical and historical perspectives that illuminate and give form to general or specialized knowledge and help to reveal its relevance.

Both teachers and students sometimes make the assumption that independent and creative study is exclusively for the gifted. In fact, the primary requirement is that the student be highly motivated, although he or she must also demonstrate ability. The departments that make up the two arts and sciences colleges encourage all qualified students to work independently in special honors courses and seminars and in conference, studio, or laboratory work. The student is free to define a major, to determine whether a given assignment will be an adventure or a chore, free to develop its latent possibilities or merely satisfy its explicit demands. True creativity presupposes more than a gift for innovation; it requires an unceasing commitment to thinking and working at one's highest level.

As competence is gained in a chosen field, the mind should be progressively sharpened, disciplined, and enriched. The student who leaves arts and sciences studies with an enhanced understanding of self and humankind, of cultural and historical heritage, of the world and

the universe, and of the moral values that make it possible to live a meaningful life, will have made the most of education, having gained something over and above the objective of vocational preparedness.

## Financial Assistance Available through the College

Special scholarships established by individuals and foundations are open to undergraduates in the College of Liberal Arts. Financial assistance is also available in many College of Liberal Arts departments, centers, and programs for specific undergraduate majors.

Students with financial need should apply for aid through the Office of Student Financial Services. The Study Abroad Office also administers a number of awards designed to help qualified students participate in international programs.

Information on College of Liberal Arts scholarships is given at <http://www.utexas.edu/cola/student-affairs/Programs/Scholarships.php>.

Information on scholarships awarded through individual departments, centers, and programs is published on their Web sites.

## Student Services

### Academic Advising

The assistant dean for the Student Division, under the guidance of the associate dean, oversees advising activity for all students in the College of Liberal Arts. The Student Division provides administrative and logistical support for all operations relating to students, including adviser training, official degree checks, and graduation certification.

Liberal Arts advisers embrace the idea that advising is teaching, and foster student development through partnerships and practices dedicated to student success. Advisers work with students to identify and achieve academic and life goals and establish a timely graduation plan, encourage critical thinking strategies, and stimulate intellectual and cultural development. In these ways, advisers teach the value of a liberal arts education for engaged, self-directed learners.

Departmental advisers work directly with their students regarding course selection. They also initiate petitions affecting the major or minor; encourage co- and extracurricular activities, including study abroad; and administer honors programs.

Students who have not yet declared a major work directly with Student Division advisers, who guide students through the process of selecting courses and exploring majors. Student Division advisers also work with students on withdrawing from classes, appeals for exceptions to standard policies and procedures, graduation applications, certifying all graduates' academic programs, and nonacademic issues.

Every student in the college has access to appropriate advisers throughout his or her academic career. In addition, students can create and view their own advising audits using IDA, the Interactive Degree Audit system. The advising audit is produced for advising purposes only and is not an official degree audit.

## Career Services

Liberal Arts Career Services (LACS) provides career assistance to current and newly graduated liberal arts students. The goal of the office is to connect College of Liberal Arts students with postgraduate and experiential learning opportunities throughout the world.

Through job search advising, résumé critiques, mock interviews, credit-based classes, and a variety of workshops and programs, LACS helps students develop the skills needed to succeed in the job search and in the workplace. LACS also provides comprehensive prelaw advising services, including application assistance and review and law school admission advising.

To connect students to the workplace, LACS manages job and internship postings, provides job and internship fairs and events, and manages an on-campus interviewing program involving a variety of employers and opportunities. Students have access to career management tools and resources with an online recruiting system, LiberalArts@Work. LACS maintains a resource room with books, DVDs, company literature, and job postings.

Hundreds of companies are assisted by LACS each year through computer-based rsum searches, information sessions, and on-campus interviewing. Résumé books for a variety of career fields are available to employers at no charge.

As a complement to the assistance available from LACS, the University's Sanger Learning Center and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies provide career services to all students. The centers offer professional assistance to students in choosing or changing their majors or careers, and planning for graduate study.

For liberal arts students who have completed a teacher certification program, Education Career Services in the College of Education assists with the education job search. Certification candidates must register with Education Career Services, George I. Sánchez Building 294, at the beginning of their student-teaching semester. The office also assists those who wish to find teaching jobs at the college level or in private schools, community colleges, or overseas schools in which certification is not required.

The University makes no promise to secure employment for each graduate.

## Admission and Registration

### Admission

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information* (<http://registrar.utexas.edu/catalogs>).

### The Bachelor of Science in Environmental Science

Students must be admitted to the Bachelor of Science in Environmental Science degree program; they may apply for admission after completing the following requirements: The student must earn a grade of at least C- in Biology 311C, Chemistry 301, and Mathematics 408C or 408N; and a grade of at least B- in Geological Sciences 401 or 303. To be competitive for admission, the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply

through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Liberal Arts Student Advising Office, Dorothy Gebauer Building 2.200, for information about the application process and application deadlines. Once admitted to the degree program, students will be advised in the Department of Geography and the Environment.

More information about the degree program is given in Bachelor of Science in Environmental Science (p. 311).

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

## Academic Policies and Procedures

### Repetition of a Course

A student in the College of Liberal Arts may not repeat any course in which he or she has earned a grade of C or better.

### Honors

University-wide honors are described in University Honors (p. 17) and in *General Information* (<http://registrar.utexas.edu/catalogs>). In addition, the College of Liberal Arts provides recognition through the Dean's Honor List and the Plan I Honors Programs. Students may also graduate with departmental honors and earn membership in one or more of the honorary scholastic societies open to undergraduates.

### Dean's Honor List

The Dean's Honor List, prepared at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered; a grade of F in any course makes the student ineligible, regardless of other grades.

The Honor List is divided into five groups; according to the number of grade points they earn, students are listed under one of the following classifications:

- Summa cum Laude (67 or more grade points)
- Cum Laude Ampla et Magna (61–66 grade points)
- Magna cum Laude (58–60 grade points)
- Ampla cum Laude (55–57 grade points)
- Cum Laude (52–54 grade points)

## Liberal Arts Honors Programs, Plan I

Liberal Arts Honors Programs coordinates the various honors opportunities available to Plan I students in the college: the Freshman Honors Program, the departmental honors programs, and the Liberal Arts Honors Program. This array of choices is designed for students who seek flexibility and choice in their honors work and for those who want to pursue an honors degree in a particular discipline.

The Freshman Honors Program gives selected students access to honors sections of lower-division introductory courses. Each student admitted to the program is required to take an active part in two courses in the first year: Liberal Arts Honors 102H, *The Idea of the Liberal Arts*, and one designated honors writing course. The program serves as a preparation for departmental honors programs and for the upper-division Liberal Arts Honors Program. Students must apply to the Freshman Honors Program when they apply to the University. Admission decisions are based on the applicant's demonstrated commitment to the liberal arts, test scores, high school records, and an application essay.

The upper-division Liberal Arts Honors Program offers challenging and intensive interdisciplinary courses taught by distinguished faculty members. Students who have completed at least sixty semester hours of coursework and have earned a University grade point average of at least 3.50 are eligible to enroll in these courses. There is no application process.

The requirements for graduation with liberal arts honors are

1. Graduation from the College of Liberal Arts with any degree other than the Bachelor of Arts, Plan II
2. A University grade point average of at least 3.50 at graduation
3. Completion of at least three upper-division liberal arts honors (LAH) courses with at least a grade of *A-* in two of the courses and a grade of at least *B* in the third
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

The statement "Liberal Arts Honors" appears on the academic record of each graduate who fulfills these requirements. The student may earn both liberal arts honors and special honors in his or her major department.

The three upper-division liberal arts honors courses required for graduation with liberal arts honors may be used, with a fourth LAH course, to fulfill the twelve-hour minor requirement for the Bachelor of Arts, Plan I, unless the work in the minor is specified by the student's major department.

## Departmental Honors Programs

Most departments in the College of Liberal Arts offer honors programs to their majors. Minimum requirements for departmental honors are

1. A University grade point average of at least 3.00
2. A three-semester-hour thesis or research project, or a reasonable equivalent, with a grade of at least *B*
3. Completion, with a grade point average of at least 3.50, of the coursework required for a major in the field
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

Each department may establish additional or more rigorous requirements.

The statement "Special Honors in (name of field)" appears on the transcript of each graduate certified as having completed the honors program.

## African and African Diaspora Studies Honors Program

Majors who plan to seek special honors in African and African diaspora studies should apply to the undergraduate adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors are

1. African and African Diaspora Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half
2. Satisfactory performance on an oral presentation of the honors thesis
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

## American Studies Honors Program

Majors who plan to seek special honors in American studies should apply to the honors adviser for admission to the honors program at least two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. In addition to the requirements of the major, requirements for graduation with special honors are

1. American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

## Ancient History and Classical Civilization Honors Program

Majors who plan to seek special honors in ancient history and classical civilization should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 is required for admission, as is a grade point average of at least 3.50 in all coursework required for the major that the student has completed. The requirements for graduation with special honors, which are in addition to the requirements of the major, are

1. Ancient History and Classical Civilization 679H, *Honors Tutorial Course*, with approval of the student's thesis topic by the director of ancient history and classical civilization, and a grade of at least *A-* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree



### **Anthropology Honors Program**

Majors who plan to seek special honors in anthropology should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate; the applicant must be recommended by the faculty member who will supervise the honors work. A University grade point average of at least 3.00 and a grade point average in anthropology of at least 3.50 are required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Anthropology 679H, *Honors Tutorial Course*, with a grade of A in each half
2. Satisfactory performance on a comprehensive oral examination centered on the thesis completed in Anthropology 679H
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### **Asian American Studies Honors Program**

Ethnic studies majors who plan to seek special honors in Asian American studies should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the concentration, are

1. Asian American Studies 679H, *Honors Tutorial Course*, with a grade of A in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the concentration in Asian American studies and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### **Asian Cultures and Languages Honors Program**

Majors who plan to seek special honors in Asian cultures and languages should apply to the honors adviser by April 30 for admission to the honors program the following fall. Requirements for admission are completion of sixty semester hours of coursework at the University, a University grade point average of at least 3.00, and a grade point average of at least 3.50 in Asian cultures and languages. Students must complete at least twelve semester hours of upper-division coursework in the Department of Asian Studies before applying for admission to the honors program. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Asian Studies 678H, *Honors Tutorial Course*, with a grade of A in each half
2. A University grade point average of at least 3.00, and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### **Asian Studies Honors Program**

Majors who plan to seek special honors in Asian studies should apply to the honors adviser by April 30 for admission to the honors program the following fall. Requirements for admission are completion

of sixty semester hours of coursework at the University, a University grade point average of at least 3.00, and a grade point average in Asian studies of at least 3.50. Students must complete at least twelve semester hours of upper-division coursework in the Department of Asian Studies before applying for admission to the honors program. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Asian Studies 678H, *Honors Tutorial Course*, with a grade of A in each half
2. A University grade point average of at least 3.00, and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### **Classical Archaeology Honors Program**

Majors who plan to seek special honors in classical archaeology should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 is required for admission, as is a grade point average of at least 3.50 in all coursework required for the major that the student has completed. The requirements for graduation with special honors, which are in addition to the requirements of the major, are

1. Classical Civilization 679H, *Honors Tutorial Course*, with a grade of at least A- in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### **Classics Honors Program**

Majors who plan to seek special honors in Greek, special honors in Latin, or special honors in classics should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in Greek (for Greek majors), Latin (for Latin majors), or Greek, Latin, and classical civilization combined (for classics majors) of at least 3.50 are required for admission. The requirements for graduation with special honors, which are in addition to the requirements of the major, are

1. Greek 679H, Latin 679H, or Classical Civilization 679H, *Honors Tutorial Course*, with a grade of at least A- in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### **Economics Honors Program**

Majors who plan to seek special honors in economics must apply to the honors adviser for admission to the honors program before the first registration period for the first semester of their senior year. Students are encouraged to apply by the beginning of the first semester of their sophomore year, so that they will be eligible to take an honors section of Economics 420K. A University grade point average of at least 3.00 and a grade point average in economics of at least 3.50 are required for admission. Before a student registers for Economics 378H, the

student's thesis proposal must be approved first by the supervising instructor and then by the honors adviser. The requirements for graduation with special honors are

1. At least thirty-four semester hours in economics
2. Economics 378H, *Honors Tutorial Course I*, and Economics 379H, *Honors Tutorial Course II*, with a grade of at least *B* in each
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### English Honors Program

Majors who plan to seek special honors in English should apply for admission to the honors program prior to their junior year. Application forms and information about the program are available in the English Advising Office, Parlin Hall 114, and on the Department of English Web site, <http://www.utexas.edu/cola/depts/english/>. The requirements for graduation with special honors are

1. Completion of the requirements for a major in English, except that English 679HB is substituted for the research seminar
2. Completion of three or more upper-division English honors courses with grades of at least *B*; these courses may be counted toward the requirements of the major; two of these courses must be completed prior to enrolling in English 679HA
3. English 679H, *Honors Tutorial Course*, with a grade of at least *B+* in 679HA and a grade of at least *A-* in 679HB, resulting in the presentation and defense of a thesis judged to be worthy of honors
4. A University grade point average of at least 3.33 and a grade point average of at least 3.66 in the coursework required for the major and for honors
5. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### French Honors Program

Majors who plan to seek special honors may apply to the honors adviser for admission to the honors program during the semester in which they will complete sixty semester hours of coursework. To enter the program, a student must have completed at least sixty semester hours of coursework, including twelve hours of upper-division coursework in French. These twelve hours must include at least one course numbered 330 or above. A University grade point average of at least 3.00 and a grade point average in French of at least 3.50 are also required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. French 379H, *Honors Tutorial Course*, with a grade of at least *B*
2. Satisfactory performance on an honors examination
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Geography Honors Program

Majors who plan to seek special honors in geography should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in geography of at least 3.50 are required for admission. The requirements for graduation with special honors are

1. Geography 679H, *Honors Tutorial Course*, with a grade of at least *A-* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### German Honors Program

Majors who plan to seek special honors in German should apply to the honors adviser for admission to the honors program upon completion of thirty semester hours; they must apply no later than upon completion of ninety semester hours. Admission is by means of a special examination; a University grade point average of at least 3.00 is also required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. German 679H, *Honors Tutorial Course*, with a grade of at least *A-* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Government Honors Program

Majors who plan to seek special honors in government should apply to the honors adviser for admission to the honors program in the spring semester of their junior year. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors are

1. Thirty-three semester hours of government, including Government 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half
2. Regular participation in honors seminars
3. Satisfactory performance on a comprehensive oral or written honors examination
4. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
5. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### History Honors Program

History majors who plan to seek special honors in history should apply to the honors adviser for admission to the honors program in the fall semester of the junior year. Application forms and information about the program are available in the History Undergraduate Advising Office, Garrison Hall 1.140. The requirements for graduation with

special honors, which are in addition to the requirements of the major, are

1. History 347L, *Seminar in Historiography*, normally taken in the spring semester of the junior year; this course may be counted toward the thirty hours in history required for the major
2. History 679H, *Honors Tutorial Course*, with a grade of at least B in each half
3. Satisfactory performance on an oral examination centered on the thesis completed in History 679HB
4. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
5. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

Normandy Scholar Program (NSP) students may substitute an approved upper-division NSP history course for the History 347L requirement.

### Humanities Honors Program

Majors who plan to seek special honors in humanities should apply to the humanities adviser for admission to the honors program no later than the first semester of the junior year. The requirements for graduation with special honors are

1. A major in humanities
2. Humanities 679H, *Honors Tutorial Course*, with a grade of at least A- in each half
3. A grade of "Recommended for Special Honors" on an oral examination, conducted and graded by faculty members qualified in the student's area of work, covering the thesis completed in Humanities 679H and a reading list
4. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
5. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### International Relations and Global Studies Honors Program

Majors who plan to seek special honors in international relations and global studies should apply to the honors adviser for admission to the honors program at least one full academic year before they expect to graduate. A University grade point average of at least 3.00 is required for admission, as is a grade point average of at least 3.50 in all coursework required for the major that the student has completed. The requirements for graduation with special honors are

1. International Relations and Global Studies 678H, *Honors Tutorial Course*, with a grade of at least an A- in each half
2. Satisfactory defense of the honors thesis completed in International Relations and Global Studies 678HB
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

The requirements for special honors are in addition to the requirements of the major, except that International Relations and Global Studies

678H may be counted toward the major in place of International Relations and Global Studies 378, the capstone research course.

### Islamic Studies Honors Program

Majors who plan to seek special honors in Islamic studies should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission to the honors program. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Islamic Studies 679H, *Honors Tutorial Course*, with a grade of A in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Italian Honors Program

Majors who plan to seek special honors in Italian may apply to the honors adviser for admission to the honors program during the semester in which they will complete sixty semester hours of coursework. To enter the program, a student must have completed at least sixty semester hours of coursework, including twelve hours of upper-division coursework in Italian. These twelve hours must include Italian 365, Italian 375, or Italian Civilization 360. A University grade point average of at least 3.00 and a grade point average in Italian of at least 3.50 are also required for admission. The requirements for graduation with special honors, which are in addition to the requirements of the major, are

1. Italian 379H, *Honors Tutorial Course*, with a grade of at least B
2. Satisfactory performance on an honors examination
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Jewish Studies Honors Program

Majors who plan to seek special honors in Jewish studies should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Jewish Studies 679H, *Honors Tutorial Course*, with a grade of A in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Latin American Studies Honors Program

Majors who plan to seek special honors in Latin American studies should apply to the honors adviser for admission to the honors

program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 and a grade point average in Latin American content coursework of at least 3.50 are required for admission. The requirements for graduation with special honors are

1. Latin American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half and approval of the thesis by both the student's supervisor and the honors adviser
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Linguistics Honors Program

Upper-division linguistics majors who plan to seek special honors in linguistics should apply to the undergraduate honors adviser for admission to the honors program no later than the beginning of their last year. A University grade point average of at least 3.50 or, in exceptional cases, approval of the undergraduate adviser is required for admission. The requirements for graduation with special honors, which are in addition to the requirements of the major, are

1. Linguistics 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours counted toward the degree

### Mexican American Studies Honors Program

Ethnic studies majors who plan to seek special honors in Mexican American studies should apply to the undergraduate adviser for admission to the honors program no later than two semesters before they expect to graduate. The requirements for admission are a University grade point average of at least 3.00 and a grade point average at least 3.50 in the coursework required for the concentration in Mexican American studies. The requirements for graduation with special honors are

1. Thirty-nine semester hours of coursework in Mexican American studies, including Mexican American Studies 679H, *Honors Tutorial Course*
2. A grade of *A* in Mexican American Studies 361 or Mexican American Studies 362
3. Mexican American Studies 679H, *Honors Tutorial Course*, with a grade of at least *B* in each half
4. Satisfactory performance on an oral presentation centered on the honors thesis completed in Mexican American Studies 679H
5. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the concentration and for honors
6. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Middle Eastern Languages and Cultures Honors Program

Majors who plan to seek special honors in Middle Eastern languages and literatures should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must

apply no later than the beginning of their last year before graduation. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Middle Eastern Languages and Cultures 679H, *Honors Tutorial Course*, with a grade of *A* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Middle Eastern Studies Honors Program

Middle Eastern studies majors who plan to seek special honors in Middle Eastern studies should apply to the honors adviser for admission to the honors program no later than two semesters before they expect to graduate. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Middle Eastern Studies 679H, *Honors Tutorial Course*, with a grade of *A* in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Philosophy Honors Program

Majors who plan to seek special honors in philosophy should apply to the undergraduate adviser for admission to the honors program at least two semesters before they expect to graduate. Completion of at least nine semester hours of upper-division coursework in philosophy is required for admission, in addition to a University grade point average of at least 3.00 and a grade point average in philosophy of at least 3.50. The requirements for graduation with special honors are

1. Philosophy 371H or 375M, with a grade of at least *B*
2. Philosophy 679H, *Honors Tutorial Course*, with a grade of at least *B* in both 679HA and 679HB
3. Satisfactory performance on an oral examination centered on the thesis completed in Philosophy 679H
4. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
5. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

Philosophy 371H or 375M may be counted toward the requirements of the major; Philosophy 679H is taken in addition to the requirements of the major.

### Plan II Honors Program: Special Honors

Plan II students who plan to seek special honors in Plan II should apply to the director of the Plan II Honors Program for enrollment in Tutorial Course 660H, *Thesis Course*, at least two semesters before they expect to graduate. A University grade point average of at least



3.50 is required. The requirements for graduation with special honors are

1. Tutorial Course 660H with a grade of A in each half, or a departmental equivalent with a grade of A
2. Satisfactory performance on an oral honors examination centered on the thesis completed in Tutorial Course 660H
3. A University grade point average of at least 3.50
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Portuguese Honors Program

The Portuguese Honors Program offers selected Portuguese majors more advanced and independent study than is possible under the regular degree plan. Students interested in this program should contact the department honors adviser prior to their senior year. A University grade point average of at least 3.00 and a grade point average in Portuguese of at least 3.50 are required for admission. The requirements for graduation with special honors are

1. Either Portuguese 378H and 379H with a grade of A in each, or two sections of Portuguese 379H with a grade of A in each
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

Portuguese 378H, *Honors Seminar*, is offered as an organized course, while Portuguese 379H, *Honors Thesis*, is offered by individual instruction. Students who choose to take two semesters of Portuguese 379H conduct individual research on a literary, linguistic, or cultural topic in the first semester and complete an honors thesis in the second semester. The student's research and writing are supervised by a department faculty member. Students who choose to take Portuguese 378H and 379H study a literary, linguistic, or cultural topic in the first semester; in the second semester, they complete an honors report under faculty supervision.

Portuguese 378H may be counted toward the requirements of the major; Portuguese 379H is taken in addition to the major requirements.

### Psychology Honors Program

Prospective candidates for special honors in psychology should apply to the honors adviser for admission to the honors program during the junior year. The application deadline is one week before the first registration period for the semester in which the student wants to enter the program. Requirements for admission are

1. A major in psychology
2. A University grade point average of at least 3.25 and a grade point average in psychology of at least 3.50
3. Completion of the following before entering the honors program: Psychology 301 or the equivalent with a grade of at least C, Psychology 418 with a grade of at least C, and two additional psychology courses
4. Consent of the honors adviser

The requirements for graduation with special honors are

1. Thirty-three semester hours of psychology, including Psychology 458, 158H, 359H, and 379H; the student must earn grades of at least B in Psychology 359H, *Honors Research I*, and Psychology 379H, *Honors Research II*
2. A University grade point average of at least 3.25 and a grade point average in all psychology courses of at least 3.50
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Religious Studies Honors Program

Majors who plan to seek special honors in religious studies should apply to the honors adviser for admission to the honors program by the end of their junior year. A University grade point average of at least 3.00 is required for admission. The requirements for graduation with special honors are

1. Thirty-three semester hours of religious studies coursework, including completion of all major requirements
2. Religious Studies 679HA, *Honors Tutorial Course*, with a grade of at least B
3. Religious Studies 679HB, *Honors Tutorial Course*, with a grade of A and approval of the thesis by the chair of the Department of Religious Studies
4. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
5. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Russian, East European, and Eurasian Studies Honors Program

Majors who plan to seek special honors in Russian, East European, and Eurasian Studies should apply to the honors adviser for admission to the honors program during the junior year or the first semester of the senior year. The application deadline is one week before the first registration period for the semester in which the student wants to enter the program. Requirements for graduation with special honors are

1. Russian, East European, and Eurasian Studies 679H, *Honors Tutorial Course*, with a grade of at least B in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

Russian, East European, and Eurasian Studies 679H, *Honors Tutorial Course* is taken in addition to the requirements of the major.

### Scandinavian Studies Honors Program

Majors who plan to seek special honors in Scandinavian studies should apply to the honors adviser for admission to the honors program upon completion of thirty semester hours; they must apply no later than upon completion of ninety semester hours. Admission is by means of a special examination; a University grade point average of at least 3.00 is also required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Scandinavian 679H, *Honors Tutorial Course*, with a grade of at least A- in each half

2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Sociology Honors Program

Majors who plan to seek special honors in sociology should apply to the honors adviser by October 1 for admission to the honors program the following spring; they should apply by April 1 for admission the following summer or fall. Requirements for admission are completion of sixty semester hours of coursework, a University grade point average of at least 3.00, and a grade point average in sociology of at least 3.50. Students must complete Sociology 302 and either 317L or an approved equivalent before applying for admission to the honors program; they should be enrolled in Sociology 317M and 379M no later than the semester in which they begin the honors thesis coursework. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Sociology 679H, *Honors Tutorial Course*, with a grade of at least A- in each half
2. Satisfactory performance on an oral defense of the senior thesis completed in the second half of Sociology 679H
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Spanish Honors Program

The Spanish Honors Program offers selected Spanish majors more advanced and independent study than is possible under the regular degree plan. Students interested in this program should contact the department honors adviser prior to their senior year. A University grade point average of at least 3.00 and a grade point average in Spanish of at least 3.50 are required for admission. The requirements for graduation with special honors are

1. Spanish 679H, *Honors Tutorial Course*, with a grade of A in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

Spanish 679H, *Honors Tutorial Course*, is offered by individual instruction. Students who are admitted to Spanish Honors conduct individual research on a literary, linguistic, or cultural topic in the first semester and complete an honors thesis in the second semester. The student's research and writing are supervised by a Department of Spanish and Portuguese faculty member. A second reader is required and may be either in the Department of Spanish and Portuguese or outside of the department. Spanish 679H is taken in addition to the major requirements.

### Urban Studies Honors Program

Majors who plan to seek special honors in urban studies should apply to the honors adviser for admission to the honors program at the beginning of their third year; they must apply no later than a year before they expect to graduate. A University grade point average of at

least 3.00 is required for admission. The requirements for graduation with special honors are in addition to the requirements for the major; however, honors students may substitute Urban Studies 679H for Urban Studies 370. The requirements are

1. Urban Studies 679H, *Honors Tutorial Course*, with a grade of at least A- in each half
2. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
3. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Women's and Gender Studies Honors Program

Majors who plan to seek special honors in women's and gender studies should apply to the honors adviser or undergraduate adviser for admission to the honors program no later than two semesters before they expect to graduate; the applicant must be recommended by the faculty member who will supervise the honors work. A University grade point average of at least 3.00 and a grade point average in women's and gender studies of at least 3.50 are required for admission. The requirements for graduation with special honors, which are in addition to the requirements for the major, are

1. Women's and Gender Studies 679H, *Honors Tutorial Course*, with a grade of A in each half
2. Satisfactory performance on a comprehensive oral examination centered on the thesis completed in Women's and Gender Studies 679H, *Honors Tutorial Course*
3. A University grade point average of at least 3.00 and a grade point average of at least 3.50 in the coursework required for the major and for honors
4. Completion in residence at the University of at least sixty semester hours of coursework counted toward the degree

### Scholastic Honorary Societies

In addition to Alpha Lambda Delta and Phi Eta Sigma, honor societies for qualified freshman students in all academic fields, the University sponsors chapters of the following national organizations for which College of Liberal Arts students are eligible.

- *Alpha Epsilon Delta*. National honorary premedical fraternity for students who have completed at least three semesters of premedical work.
- *Alpha Kappa Delta*. National honorary sociology fraternity.
- *Delta Phi Alpha*. National honorary German fraternity.
- *Dobro Slovo*. National honorary Slavic fraternity.
- *Eta Sigma Phi*. National honorary classical languages fraternity.
- *Gamma Theta Upsilon*. National honorary geography fraternity.
- *Iota Iota Iota*. National honorary Women's Studies society.
- *Kappa Kappa Psi*. National honorary band fraternity.
- *Mortar Board*. National honorary society for seniors.
- *Omicron Delta Epsilon*. National honorary economics fraternity.
- *Omicron Delta Kappa*. National honorary leadership fraternity.
- *Phi Alpha Theta*. National honorary history fraternity.
- *Phi Beta Kappa*. National honorary society recognizing academic achievement in the arts and sciences.

- *Phi Kappa Phi*. National honor society open to students in all academic fields.
- *Pi Delta Phi*. National honorary French fraternity.
- *Pi Sigma Alpha*. National honorary political science fraternity.
- *Psi Chi*. National honorary psychology fraternity.
- *Sigma Delta Pi*. National honorary Spanish fraternity.
- *Sigma Tau Delta*. National honorary English society.
- *Tau Beta Sigma*. National honorary band society.

A student may schedule an official degree check once he or she has completed ninety hours of coursework and has officially declared a major and minor or concentration in the Student Division. A student in the College of Liberal Arts is required to declare a major by the time he or she has completed sixty semester hours of coursework. The student may submit an Official Declaration of Major and Minor either online at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Declare-a-Major.php> or in the Student Division, Dorothy Gebauer Building 2.200.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file a graduation application form either online at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Graduation/Application.php> or in the Student Division. This should be done at the beginning of the last semester; it must be done by the deadline to apply for an undergraduate degree, which is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

## Graduation

### Special Requirements of the College

All students must fulfill the general requirements (p. 18) for graduation. Students in the College of Liberal Arts must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts, Plan I, the Bachelor of Science in Environmental Science, and the Bachelor of Science in Psychology, these sixty hours must include at least eighteen hours in the major. For the Bachelor of Arts, Plan II, thirty of these sixty hours must be taken in the College of Liberal Arts or the College of Natural Sciences.
2. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Additional requirements of the College of Liberal Arts are given later in this chapter with the requirements of the college's four degrees.
3. Students may not complete degree requirements at another institution of higher education during the semester in which the degree is to be conferred.

### Degree Audit and Applying for Graduation

An official degree audit lists all the requirements of the student's major, according to a catalog under which the student is eligible to graduate. The audit also includes any requirements that are specific to the student's individual program. It is the official statement by the Office of the Dean, Student Division, of the student's progress toward a degree. Students are required to have an official degree check appointment with a Dean's Office, Student Division adviser one semester before the semester in which the degree is to be conferred. It is strongly recommended that students schedule regular degree check appointments with the Student Division advisers once they have completed ninety semester hours of coursework.

The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is entitled to graduate and for registering so as to fulfill these requirements. The student should seek an official ruling in the Student Division before registering if in doubt about any requirement.

## Degrees and Programs

The College of Liberal Arts offers four degree programs: the Bachelor of Arts, Plan I; the Bachelor of Arts, Plan II; the Bachelor of Science in Environmental Science with a major in geographical sciences; and the Bachelor of Science in Psychology. The requirements of the Bachelor of Arts, Plan I are described in Bachelor of Arts, Plan I (p. 296). The Bachelor of Arts, Plan II, a broad liberal arts honors program for outstanding students, is described in Bachelor of Arts, Plan II (p. 309).

The Bachelor of Science in Environmental Science, offered by the College of Liberal Arts, the College of Natural Sciences, and the Jackson School of Geological Sciences, is designed for students interested in an interdisciplinary scientific perspective on environmental issues, analysis, and management. Students pursuing the degree through the College of Liberal Arts major in geographical sciences. The requirements for the degree are given in Bachelor of Science in Environmental Science (p. 311).

The Bachelor of Science in Psychology is designed to offer students a more extensive scientific program than the Bachelor of Arts with a major in psychology. The requirements for the BSPsy are given in Bachelor of Science in Psychology (p. 313).

A student may not earn more than one Bachelor of Arts degree from the University. A student may not earn more than one Bachelor of Science in Environmental Science degree from the University. A student may not earn both the Bachelor of Arts with a major in psychology and the Bachelor of Science in Psychology. A student may not earn both the Bachelor of Arts with an intercollege major in kinesiology and health and the Bachelor of Science in Kinesiology and Health.

The title of a graduate's degree appears on his or her diploma, but the major does not. Both the degree and the major appear on the graduate's University transcript.

### Applicability of Certain Courses

#### Physical Activity Courses

Physical activity (PED) courses and Kinesiology 119 may not be counted toward a degree in the College of Liberal Arts. However,

they are counted as courses for which the student is enrolled, and the grades are included in the grade point average.

## ROTC Courses

ROTC units are maintained on campus by the Departments of Air Force Science, Military Science, and Naval Science. Information about each program is available from the chair of the department.

Nine semester hours of designated University of Texas at Austin coursework in air force science, military science, or naval science may be counted toward any degree in the College of Liberal Arts. In general, this credit may be used only as electives or to fulfill the writing requirement. However, cross-listed courses may be used as appropriate to fulfill other degree requirements. A list of approved ROTC courses is available in the College of Liberal Arts, Student Division, Dorothy Gebauer Building 2.200.

## Conference Courses and Internship Courses

No more than six semester hours of credit earned in conference courses may be counted toward a single major in the College of Liberal Arts; no more than nine semester hours may be counted toward the degree.

No more than six semester hours of credit earned in internship courses may be counted toward a single major in the College of Liberal Arts; no more than nine semester hours may be counted toward the degree.

In addition, no more than nine semester hours of conference courses and internship courses combined may be counted toward a single major in the College of Liberal Arts; no more than twelve hours of conference courses and internship courses combined may be counted toward the degree.

## Bible Courses

Bible courses may be counted as lower-division electives in College of Liberal Arts degree programs that have room for such electives. No more than twelve semester hours of Bible courses may be counted toward any degree offered by the University.

## Admission Deficiencies

Students admitted to the University with deficiencies in high school units must remove them by the means prescribed in *General Information*. Contact the dean's office for further information.

## Correspondence and Extension Courses

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the College of Liberal Arts unless specifically approved in advance by the dean. In very special circumstances, the dean may allow a student in residence to take one or more courses by extension or correspondence. No more than 30 percent of the semester hours required for any degree offered in the College of Liberal Arts may be taken by correspondence. For additional information about correspondence work by resident students, see *General Information* (<http://registrar.utexas.edu/catalogs>).

## Courses Taken on the Pass/Fail Basis

No more than nineteen semester hours of coursework completed on the pass/fail basis may be counted toward the Bachelor of Arts,

Plan II; no more than sixteen semester hours of such coursework may be counted toward the other degrees in the college. In general, only electives may be taken on the pass/fail basis. Complete rules on registration on the pass/fail basis are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

## Courses in a Single Field

No more than thirty-six semester hours (thirty-nine for the Bachelor of Arts, Plan I) may be counted in any one field of study, including the major, unless major requirements state otherwise. No more than thirty-six semester hours (thirty-nine for the Bachelor of Arts, Plan I) may be counted in any one college or school other than the College of Liberal Arts or the College of Natural Sciences.

## UTeach-Liberal Arts

UTeach-Liberal Arts is a professional teacher preparation program for liberal arts students pursuing degrees in Arabic, Chinese, economics, English, French, history, geography, German, government, Japanese, Latin, Russian, and Spanish. Students may seek certification to teach middle or high school grades for the following certification areas:

1. History, grades eight through twelve
2. Language arts and reading, grades four through eight or eight through twelve
3. Languages other than English, grades six through twelve
4. Social studies, grades four through eight or eight through twelve

UTeach-Liberal Arts offers a four-semester program for undergraduate students and a three-semester program for postbaccalaureate students. Admission into the program is required. Undergraduate students may enter the program as early as the second semester of their freshman year.

UTeach-Liberal Arts students benefit from an innovative program that emphasizes a practical, hands-on field experience in local public school classrooms combined with intensive coursework. The program provides students with an excellent firsthand glimpse into the world of teaching. Other key features of the program are mentorship and seminar instruction, cohort support, discipline-specific pedagogical preparation, literacy training, and innovative use of technology. More information about UTeach-Liberal Arts and the admission process is available online at <http://www.utexas.edu/cola/progs/uteach/>.

## Program in Comparative Literature

The program in comparative literature approaches the study of literature from a variety of viewpoints rather than from the viewpoint of a single language or nation. Courses in literary history, practical criticism, and critical theory stress the relationship between literature and other disciplines in the humanities, the arts, and the social sciences. The program offers both the doctoral and the master's degree and sponsors courses on both the graduate and the undergraduate level. All comparative literature courses are conducted in English.

To introduce undergraduates to the field of study, the comparative literature faculty has designed a cluster of courses in critical thinking and world literature. These courses concentrate on writing and thinking critically, with a focus on literary texts drawn from around the world, in the context of an interdisciplinary and international program. The twelve-hour cluster complements many majors in liberal arts; with the approval of the student's major department, it may be used to fulfill the



minor requirement. More information is available from the comparative literature program.

## Transcript-Recognized Certificate Programs

The College of Liberal Arts offers three certificate programs, which are open to all degree-seeking University undergraduates. Undergraduates who complete certificate requirements in conjunction with their degree requirements or within one year after earning the degree receive recognition on the University transcript; students in integrated undergraduate/graduate programs must complete certificate requirements within one year after they complete their undergraduate degree requirements. A maximum of nine semester hours of certificate coursework may be taken after the student has earned the undergraduate degree. At least half of the required certificate coursework must be completed in residence at the University; some programs may require more work in residence.

A student may not earn a certificate in the same field as his or her major, and at least one certificate course must be outside the requirements of the major. However, certificate courses outside the major may be counted toward other degree requirements.

Students should apply for the certificate when they apply for graduation or when they complete the certificate program, whichever is later. Transcript recognition is awarded at the end of that semester or summer session.

Students outside the College of Liberal Arts should contact their dean's office for permission to complete a certificate program and for the applicability of certificate requirements toward their individual degrees. Students in the College of Liberal Arts may complete certificate programs offered through other colleges. These are described in Transcript-Recognized Certificate Programs (p. 14) and by each college that offers a transcript-recognized certificate program. Certificate programs that do not lead to transcript recognition are also described in the respective college's catalog section.

## Certificate in Computational Science and Engineering

See the Certificate in Computational Science and Engineering (p. 15).

## Core Texts and Ideas Certificate

The certificate program in core texts and ideas is designed to provide a coherent path through the University's core curriculum with an integrated, interdisciplinary sequence of courses on great works of philosophy, literature, science, and the arts that emphasizes debates about fundamental questions of enduring human concern. The program provides a grounding in the major ideas that have shaped the Western world and gives students the opportunity to study Eastern works as well. Students complete courses in four required areas and two elective areas. The four required areas are the philosophy and literature of the ancient world, especially Greece; basic texts of major world religions; the history of political philosophy; and the principles that formed the basis for the founding of the United States. Elective areas include philosophy, the arts, history, literature, and the history and philosophy of science and mathematics.

The certificate program requires eighteen semester hours of coursework, including at least twelve hours completed in residence. Students must fulfill the following requirements:

1. The requirements of an undergraduate major
2. The following twelve semester hours of coursework:
  - A. Philosophy and literature of the ancient world: Core Texts and Ideas 301, *Ancient Philosophy and Literature*
  - B. History of political philosophy: Core Texts and Ideas 302, *Classics of Social and Political Thought* or Core Texts and Ideas 303, *Competing Visions of the Good Life*
  - C. Basic texts of major world religions: Core Texts and Ideas 304, *World Religions: Traditions and Texts*
  - D. Principles of the founding of the United States: Government 312P, *Constitutional Principles: Core Texts* or Government 312R, *Constitutional Principles: Equality*
3. Six additional semester hours of coursework chosen from a list of approved electives available from the academic adviser in the Thomas Jefferson Center for Core Texts and Ideas

All courses must be taken on the letter-grade basis. Each semester a list of approved alternatives to the courses in the four required areas is available from the academic adviser in the Thomas Jefferson Center for the Study of Core Texts and Ideas.

## Indigenous Studies Certificate

The main goal of the indigenous studies certificate program is to encourage active intellectual and community engagement with indigenous peoples and cultures. The program allows undergraduate students to develop interdisciplinary expertise in indigenous studies and comparative approaches to their primary field of interest. Each student develops a specialization within the program that is tailored to his or her academic and professional development. Students concentrate their studies in two of the following eight strands: Mayan culture, Mesoamerica, indigenous arts, indigenous peoples of Latin America, indigenous peoples in the United States and Canada, indigenous peoples of the Americas, indigenous politics and human rights, and indigenous writing and language.

Courses the student has completed at the time of application to the program may be counted toward the certificate. Upon completion of the course requirements, the student writes a three- to four-page essay that describes his or her intellectual work in the program and how the experience contributed to his or her academic career at the University.

The certificate program requires eighteen semester hours of coursework, including at least nine semester hours completed in residence. Students must fulfill the following requirements:

1. The requirements of an undergraduate major
2. Three semester hours in a lower-division introductory or foundational course with indigenous studies content, such as English 314V (Topic 5: *Native American Literature and Culture*), History 317L (Topic 3: *Introduction to Native American History*), or other courses from an approved list
3. Six semester hours of approved coursework in each of two of the following eight strands: Mayan culture, Mesoamerica, indigenous arts, indigenous peoples of Latin America, indigenous peoples in the United States and Canada, indigenous peoples of the Americas, indigenous politics and human rights, indigenous writing and language
4. An approved upper-division capstone course in indigenous studies chosen from courses on an approved list

5. At least three courses must be taken in a field of study outside of the student's major department

Each semester a list of approved courses that meet the requirements above is available in the Department of Anthropology undergraduate advising office.

## Texas IP Certificate

The Texas Interdisciplinary Plan (Texas IP) Certificate allows students to pursue an integrated course of study with a focus on the development and application of critical thinking skills. The curriculum is designed to complement the student's major with an interdisciplinary sequence of courses that may encompass the humanities, the social sciences, the natural sciences, and the arts. Students have the opportunity to present an original work in a capstone seminar. Those who plan to pursue the certificate should apply to the program adviser for admission no later than the end of their sophomore year. More information about the Texas IP Certificate is given at <http://www.utexas.edu/tip/TexasIP/>.

The certificate program requires eighteen semester hours of coursework, including at least nine hours completed in residence. Students must meet the following requirements:

1. *Critical Thinking Seminar*: One of the following courses: Liberal Arts 302, Philosophy 311, Natural Sciences 301C (Topic: *Research Methods*), 302, 311, Undergraduate Studies 303 (Topic: *Thinking About Thinking across the Disciplines*)
2. *Critical Writing Seminar*: Rhetoric and Writing 309K or 309S, with other Rhetoric and Writing courses eligible for substitution on a petition basis
3. Three additional courses, including at least three semester hours of upper-division coursework, from an interdisciplinary topic area prescribed by the Texas Interdisciplinary Plan; or, with approval of the Texas IP Faculty Advisory Panel, a three-course interdisciplinary topic area designed by the student
4. *Senior Capstone Seminar*: Liberal Arts 371 or Natural Sciences 371

In the College of Liberal Arts, a student whose major includes a minor may use the Texas IP curriculum as the minor if he or she completes the Texas IP coursework and if the minor is not specified by the major department. Final approval of the Texas IP minor coursework rests with the College of Liberal Arts associate dean for academic affairs or the associate dean's authorized representative.

In the College of Natural Sciences, the Texas IP Certificate may be used to complement any major. Some certificate courses will also fulfill degree requirements established by the student's major department and are noted when they appear; however, some of the eighteen semester hours required for the certificate may be in addition to the number of hours required for the degree.

## Concentrations

A concentration allows students to pursue a program of interdisciplinary specialization in addition to the major. Within the general requirements for the degree of Bachelor of Arts and the requirements of the major, a student may also complete a concentration in one of the following programs offered by the College of Liberal Arts.

Courses required for a concentration may also be counted toward the requirements of the Bachelor of Arts, Plan I, when applicable.

Students in other degree programs and colleges should check with their dean's offices about course applicability and restrictions. The following concentrations are not recognized on the student's transcript.

## Cultural Studies

Students who wish to enter the cultural studies concentration should consult the undergraduate adviser in the Américo Paredes Center for Cultural Studies.

The concentration is designed to complement the student's major, with courses drawn from the humanities, the social sciences, and the arts. With the approval of his or her dean and the cultural studies adviser, a student outside the College of Liberal Arts may complete a concentration in cultural studies.

The student must fulfill the following requirements:

1. Completion of the requirements of a major
2. Two of the following courses: Anthropology 305, 325L, Communication 309, Mexican American Studies 307, Music 342, Radio-Television-Film 314, Theatre and Dance 357T
3. Cultural Studies 340
4. Three additional courses from a group of cultural studies–related courses prescribed by the Cultural Studies Curriculum Committee
5. Two additional courses from a group of supporting courses prescribed by the Cultural Studies Curriculum Committee

## Science, Technology, and Society

The goal of this concentration is to prepare students to use emerging technologies humanely and critically; to participate thoughtfully in public discourse about scientific and technological innovation; and to understand the consequences of public and private decisions about scientific advancements and technologies. The concentration is designed to allow students to gain experience in analyzing historical, philosophical, rhetorical, economic, political, aesthetic, and scientific practices and methods of inquiry. Students have the opportunity to explore the social impacts of rapid scientific and technological change. The program integrates approaches from the liberal arts, social sciences, and humanities with new developments in science and technology. The science, technology, and society concentration focuses on several key areas, including nanotechnology, gaming, surveillance, mobile technologies, e-society, education, health care, and computer-mediated communication.

The program of study is designed to complement the major by helping the student to gain a richer and more profound understanding of the dynamic relationships among science, technology, culture, and the individual. The concentration is open to liberal arts majors and, with the approval of their deans, to students in other colleges and schools.

The student must fulfill the following requirements:

1. A departmental major or the equivalent
2. Eighteen semester hours of coursework, consisting of Science, Technology and Society 319 or 321; Science, Technology and Society 331; nine semester hours of related coursework; and a capstone seminar, Science, Technology and Society 360

A list of related courses that will fulfill requirement 2 is available from the science, technology, and society adviser; courses that are not on the list may be used with written consent of the adviser.

## Western Civilization and American Institutions

The concentration in western civilization and American institutions is designed to complement departmental specialization with an integrated sequence of courses that emphasizes a multidisciplinary approach to the major ideas of western civilization and their impact on the development of the institutions of the United States. Students who wish to enter the concentration should consult the faculty adviser. With the approval of his or her dean and the western civilization and American institutions adviser, a student outside the College of Liberal Arts may complete the concentration.

The student must fulfill the following requirements:

1. Completion of the requirements of a major
2. Three semester hours of Government 335M, *Topics in Political Thought*, chosen from a list of topics approved by the western civilization and American institutions faculty adviser
3. Fifteen additional semester hours of coursework in western civilization and American institutions, chosen in consultation with the faculty adviser for the concentration, from a list prescribed by the western civilization and American institutions faculty committee

## Bachelor of Arts, Plan I

The requirements for the Bachelor of Arts under Plan I are designed to give each student flexibility in the selection of courses to meet individual needs.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including twenty-one hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. Provided residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to sixteen semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

All students must complete the University's Core Curriculum (p. 22). In the process of fulfilling the core curriculum and other degree requirements, all students are expected to complete courses with content in the following three areas:

1. Writing: two flagged courses beyond Rhetoric and Writing 306 or its equivalent
2. Global cultures: one flagged course
3. Cultural diversity in the United States: one flagged course

Courses with sufficient content in these areas will be identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), by the appropriate flags. A course may carry more than one flag. The School

of Undergraduate Studies monitors flagged courses to ensure that they meet the guidelines set by the General Faculty.

The specific requirements for the Bachelor of Arts, Plan I, consist of prescribed work, major and minor requirements, and electives. In some cases, a course that fulfills one of these requirements may also be counted toward the core curriculum; these courses are identified below.

Courses in the major and minor may also be used to fulfill prescribed work requirements unless expressly prohibited. A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills one requirement may also be used to fulfill a flag requirement.

The student must fulfill the University's general requirements (p. 18) for graduation and the requirements of the College of Liberal Arts. University graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded; for the BA, Plan I, the student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward the major requirements. The student should also refer to the description of his or her major in the section Majors and Minors below, since some majors include higher minimum scholastic requirements.

More information about grades and the grade point average is given in *General Information* (<http://registrar.utexas.edu/catalogs>).

## Prescribed Work

1. *Writing and Literature*: English 316K and two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language*: Four semesters or the equivalent in a single foreign language. The foreign language requirement is the attainment of a certain proficiency, as well as the completion of a specified number of courses; however, the courses taken to gain proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

To achieve proficiency in a foreign language as rapidly as possible, qualified students are urged to take intensive foreign language courses. Information about these courses is available from the departments that offer them.

Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course(s) must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core curriculum.

Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. **Mathematics:** Three semester hours in mathematics, excluding Mathematics 301, 316K, and 316L. Some courses that fulfill this requirement may also be counted toward the mathematics requirement of the core curriculum.
5. **Natural science:** Six semester hours in natural sciences, in addition to the courses counted toward the science and technology requirements of the core curriculum. Courses used to fulfill this requirement must be chosen from the fields of study listed below; no more than three hours may be in either the history of science or the philosophy of science.

To satisfy the mathematics and science and technology requirements of the core curriculum and the mathematics and natural science requirements of the BA, Plan I, a student may count (1) no more than twelve hours in mathematics, computer science, and statistics and scientific computation combined; and (2) no more than nine hours in any single field of study.

- A. Astronomy
- B. Biology
- C. Chemistry
- D. Geological sciences
- E. Marine science
- F. Nutrition
- G. Physical science
- H. Physics
- I. Mathematics (excluding Mathematics 301), computer science, statistics and scientific computation
- J. Other alternative science courses approved by the dean
- K. Approved alternative courses in history of science and philosophy of science

Lists of approved courses in science and the history and philosophy of science are available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

6. **Cultural expression, human experience, and thought.** Three semester hours chosen from a list of approved courses. The course(s) must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

## Electives

In addition to the core curriculum, prescribed work, and major and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of conference courses and internship courses combined as described in Conference Courses and Internship Courses (p. 293); twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-nine hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences, unless major requirements state otherwise; and thirty-nine hours in any other single college or school of the University. Mathematics courses at the level of college algebra may not count toward elective hours.

## Majors and Minors

### Major Requirements

The Bachelor of Arts, Plan I, requires the completion of all requirements for one major. The number of semester hours required in the major varies with the field selected. Unless the requirements of the major state otherwise, a major consists of at least twenty-four but no more than forty-two semester hours, with at least fifteen hours in upper-division courses. Of these fifteen hours, six must be taken in residence. At least eighteen hours of coursework in the major, including six hours of upper-division coursework, must be completed in residence at the University.

### Minors

Students in most majors must also fulfill the requirements of a minor. The minor consists of a specific number of semester hours of coursework completed outside the student's major field. The requirements of the minor are established by the major department and are given with the major requirements below. Additional restrictions may be imposed by the academic department(s) in which the student takes the courses used to fulfill the requirements of the minor; before planning to use a course to fulfill the minor requirement, the student should consult the department that offers the course.

The same courses may not be used to fulfill the requirements for both a major and a minor. Courses used to fulfill the requirements for a minor must be taken on the letter-grade basis, and six of the required semester hours must be taken in residence.

## African and African Diaspora Studies

### Major

Thirty-six semester hours of coursework in African and African diaspora studies, including at least twenty-four hours of upper-division coursework. The following courses are required:

1. African and African Diaspora Studies 303, *Introduction to African and African Diaspora Studies*
2. African and African Diaspora Studies 375, *Community Internship*
3. African and African Diaspora Studies 376, *Senior Seminar*



4. Four upper-division courses (at least twelve semester hours) chosen from one of the following tracks:
  - A. Critical black studies
  - B. Black education, psychology, and mental health
  - C. Black popular culture: music, art, literature, and sports
  - D. Blacks in government, law, and policy
  - E. Africa and African diasporic cultures and languages
  
5. Two additional courses (six semester hours), including at least three upper-division hours, chosen from the following themes:
  - A. Capitalism, white supremacy, and black resistance
  - B. Black feminism and queer theories
  - C. History and theory of black studies
  - D. Urban studies: economics, health, and education
  - E. Migration and diaspora
  - F. Expressive culture
  
6. Nine additional semester hours of African and African diaspora studies coursework

A list of courses for each track and theme is available from the undergraduate adviser. Coursework used in requirements 4, 5, and 6 must cover at least two geographical regions of the African diaspora, identified as U.S., Latin America, Africa, and Europe. A list of courses with their geographical affiliation is available in the department advising office.

For students interested in taking courses within the major that incorporate activism within the major, in addition to the community internship required for all majors, courses will be flagged as "community engaged." A list of community-engaged courses is available in the department advising office.

## American Studies

### Major

Twenty-four semester hours of coursework in American Studies, including at least fifteen hours of upper-division coursework. The following courses are required:

1. American Studies 310
2. American Studies 311S
3. American Studies 355 and 356
4. Nine semester hours chosen from topics of American Studies 370
5. Three additional semester hours of American studies coursework

### Minor for American Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## Ancient History and Classical Civilization

### Major

Thirty-three semester hours of coursework as described below, at least twenty-one of which must be upper-division:

1. Six semester hours of premodern history, chosen from topics of Ancient History and Classical Civilization 310 and 330
2. Nine semester hours of upper-division Greek history and/or Roman history, chosen from topics of Ancient History and Classical Civilization 325
3. Nine semester hours of classical civilization, Greek, Latin, and/or topics of Ancient History and Classical Civilization 319 and 325, which exclude coursework used to fulfill the foreign language requirement
4. Six semester hours of upper-division coursework in Greek and/or Latin
5. Ancient History and Classical Civilization 378

## Anthropology

### Major

Thirty semester hours of anthropology, including at least eighteen hours of upper-division coursework, consisting of

1. Anthropology 301, 304, and either 302, 305, or 307
2. At least three semester hours of upper-division coursework in each of the following areas
  - A. Theory: Anthropology 330C or an approved alternate course
  - B. Methods: Anthropology 453, 662, 462M, or an approved alternate course
  - C. Culture/geographic area
3. Twelve additional hours, including at least nine hours of upper-division coursework

A list of the courses in each area of requirement 2 is available from the anthropology adviser.

### Minor for Anthropology Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## Asian American Studies

1. Asian American Studies 301.
2. Twenty-one semester hours, including at least eighteen hours of upper-division coursework in Asian American Studies, and with at least one three-hour course in each of the following groups:
  - A. Asian American Studies 320, *Topics in Asian American Culture, Literature, and Media Studies*

- B. Asian American Studies 325, *Topics in Asian American Economics, History, and Government* or Asian American Studies 330, *Topics in Asian American Anthropology, Geography, and Sociology*
3. *The Minor*: Twelve semester hours, including at least six hours of upper-division coursework, in any one field of study in the University. Six of the required semester hours must be taken in residence.

## Asian Cultures and Languages

The Bachelor of Arts with a major in Asian cultures and languages is offered with specialization in Chinese, Japanese, Korean, Hindi/Urdu, Malayalam, Sanskrit, or Tamil.

### Major

Twenty-four semester hours, including twenty-one hours of upper-division coursework, in the language and culture of one of the following areas of specialization. A list of approved Asian studies courses related to the areas of specialization is available in the Department of Asian Studies.

1. *Chinese*
  - A. Chinese 322 or 340 (Topic: *Classical Chinese Poetry*)
  - B. Three semester hours chosen from Chinese 320L, 330, and 340
  - C. Six additional semester hours of upper-division coursework in Chinese
  - D. Asian Studies 379
  - E. Nine additional semester hours in Asian studies courses related to China, at least six hours of which must be upper-division
2. *Japanese*
  - A. Japanese 322 or 330
  - B. Twelve additional semester hours of upper-division coursework in Japanese
  - C. Asian Studies 379
  - D. Six additional semester hours in Asian studies courses related to Japan, at least three hours of which must be upper-division
3. *Korean*
  - A. Asian Studies 301M (Topic 10: *Introduction to Korean Culture and History*)
  - B. Twelve semester hours of upper-division coursework in Korean
  - C. Asian Studies 379
  - D. Six additional upper-division semester hours in Asian studies courses related to Korea
4. *Hindi/Urdu*
  - A. Twelve semester hours of upper-division coursework in Hindi and/or Urdu
  - B. Asian Studies 379

- C. Nine additional semester hours in Asian studies courses related to South Asia, at least six hours of which must be upper-division. Three semester hours of upper-division coursework in Hindi, Urdu, or Sanskrit may be counted toward this requirement.

5. *Malayalam*
  - A. Twelve semester hours of upper-division coursework in Malayalam
  - B. Asian Studies 379
  - C. Nine additional semester hours in Asian studies courses related to South Asia, at least six hours of which must be upper-division. Three semester hours of upper-division coursework in Malayalam, Sanskrit, or Tamil may be counted toward this requirement.
6. *Sanskrit*
  - A. Twelve semester hours of upper-division coursework in Sanskrit
  - B. Asian Studies 379
  - C. Nine additional semester hours in Asian studies courses related to South Asia, six hours of which must be upper-division. Three semester hours of upper-division coursework in Sanskrit, Hindi, or Urdu may be counted toward this requirement.

7. *Tamil*
  - A. Twelve semester hours of upper-division coursework in Tamil
  - B. Asian Studies 379
  - C. Nine additional semester hours in Asian studies courses related to South Asia, six hours of which must be upper-division. Three semester hours of upper-division coursework in Tamil, Sanskrit, or Malayalam may be counted toward this requirement.

## Minor for Asian Cultures and Languages Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Asian Studies

### Major

Twenty-four semester hours of Asian studies coursework, at least eighteen of which must be upper-division, in one of the two areas of specialization listed below. Students specializing in East Asia must choose either the general track or the Taiwan track. Courses counted toward the foreign language requirement may not also be counted toward the major unless otherwise noted. A list of courses that fulfill the requirements of the areas of specialization is available in the Department of Asian Studies.

## 1. East Asia

### A. General track

- i At least three semester hours of coursework in East Asian history
- ii A three-hour Asian studies course related to South Asia
- iii Asian Studies 379
- iv Fifteen additional semester hours in Asian studies courses related to East Asia, preferably in more than one East Asian cultural area. Six semester hours of upper-division coursework in Chinese, Japanese, or Korean language may be counted toward this requirement.
- v Two years of Chinese, Japanese, or Korean to fulfill the foreign language requirement

### B. Taiwan track

- i At least three semester hours of coursework in Taiwanese history
- ii A three-hour Asian studies course related to South Asia
- iii Asian Studies 379
- iv Fifteen additional semester hours in Asian studies courses related to East Asia, including at least six hours related to Taiwan, three hours related to China, three hours related to Japan, and three hours in upper-division Asian studies courses related to East Asia or in upper-division Chinese language courses
- v Two years of Chinese language to fulfill the foreign language requirement, focusing in these courses on the traditional characters used in Taiwan

## 2. South Asia

- A. At least three semester hours of coursework in South Asian history
- B. A three-hour Asian studies course related to East Asia
- C. Asian Studies 379
- D. Fifteen additional semester hours in Asian studies courses related to South Asia. Six semester hours of upper-division coursework in Bengali, Hindi, Malayalam, Pashto, Sanskrit, Tamil, Telugu, or Urdu language may be counted toward this requirement.
- E. Two years of Bengali, Hindi, Malayalam, Pashto, Sanskrit, Tamil, Telugu, or Urdu to fulfill the foreign language requirement

## Minor for Asian Studies Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Classical Archaeology

Students majoring in classical archaeology must use Greek or Latin to fulfill the foreign language requirement. Coursework counted toward the foreign language requirement may not also be counted toward the major.

### Major

Thirty-six semester hours of coursework, at least twenty-one of which must be upper-division, consisting of

1. Nine hours of coursework in classical archaeology consisting of Classical Civilization 307C, 307D, or 307K; 317; and 340
2. Three hours of approved coursework in archaeological techniques and analysis, selected from a list of approved courses available in the Department of Classics
3. Three hours of foreign study approved by the classical archaeology faculty adviser, to be provided by Classical Civilization 362 or another approved course
4. Three hours of upper-division coursework in Greek history or Roman history, chosen from topics of Ancient History and Classical Civilization 325 and 378
5. Three hours of upper-division coursework in ancient art history, chosen from Art History 325, 327J, 327L, 327M, 327N, 327P, 327R, 362, and other approved courses in ancient art history
6. Six hours of upper-division coursework in either Greek or Latin
7. Nine additional hours of coursework chosen from Anthropology 304, Religious Studies 354D, approved topics of Middle Eastern Studies 342, and the areas listed in requirements 1 through 6

## Classics

### Major

Twenty-four semester hours of coursework, at least eighteen of which must be upper-division, in Latin, Greek, and classical civilization; these twenty-four hours must include at least six hours of upper-division coursework in Latin, at least six hours of upper-division coursework in Greek, and at least three hours of upper-division coursework in classical civilization. All students must complete Greek 362, Greek 365, or Latin 365. With the approval of the Department of Classics, specific courses outside the department may be counted as courses in classical civilization.

### Minor for Classics Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one field of study in the University other than Latin, Greek, and classical civilization; or (2) nine semester hours of coursework beyond 507 or the equivalent in a foreign language other than Latin or Greek, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Economics

All economics majors must earn grades of at least C- in either Mathematics 408C and 408D or Mathematics 408K and 408L.

Mathematics 403K and 403L (and transfer equivalents) may not be substituted for the required math courses.

## Major

Twenty-eight semester hours of economics, consisting of Economics 304K, 304L, 420K, 320L, 329, 341K, and nine additional hours of upper-division coursework. At least six of the additional semester hours of upper-division coursework must be in courses for which a grade of at least C- in Economics 420K is a prerequisite. Economics 420K, 320L, 329, and 341K must be completed in residence. Economics majors must take Economics 420K at least two semesters prior to completion of the degree. Students may not enroll in Economics 420K more than twice. All economics majors must earn a grade of at least C- in each course counted toward fulfillment of the major requirements. A minimum grade point average of at least 2.00 in all courses taken at the University and counted toward the major is also required.

No student may register for more than ten semester hours of economics in any one semester without approval of an undergraduate adviser in the Department of Economics.

## Minor for Economics Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## English

### Major

Thirty-three semester hours of English, including at least twenty-four semester hours of upper-division coursework consisting of the following:

1. English 314J, 314L, or 314V
2. English 316K
3. An upper-division course in literature or language prior to 1630
4. An upper-division course in literature or language from 1630 to 1830
5. An upper-division course in literature or language from 1830 to 1940
6. An upper-division diverse perspectives course
7. An upper-division single- or dual-author course
8. An upper-division research seminar
9. Nine additional semester hours of coursework in English, including at least six semester hours of upper-division coursework

A list of courses that may be used to fulfill requirements 3–9 is available in the English Advising Office, Parlin Hall 114, and on the Department of English Web site, <http://www.utexas.edu/cola/depts/english/>.

The student must make a grade of at least C- in each course counted toward fulfillment of the major requirements. A minimum grade point average of 2.00 in courses taken at the University and counted toward the major is also required.

Students are discouraged from taking more than six semester hours of coursework in English in a semester. No student may take more than nine hours of coursework in English in a semester.

## Minor for English Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve semester hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

## Ethnic Studies

The ethnic studies program is administered by the Center for Asian American Studies and the Center for Mexican American Studies. The directors and executive committees of these centers advise students, prescribe groups of courses that fulfill content requirements, and authorize course substitutions when appropriate. Students majoring in ethnic studies must choose one of two areas of concentration and meet the requirements of that concentration as outlined in Asian American Studies (p. 298) and Mexican American Studies (p. 305).

## European Studies

Students select one of two tracks: (I) European studies with a focus on pre-1700 Europe, and (II) European studies with a focus on post-1700 Europe. The tracks are interdisciplinary in nature and draw on courses in many departments and allow students considerable opportunity to shape their coursework around their interests. Students majoring in European studies must complete six semester hours of upper-division coursework in one of the following languages: Czech, Danish, Dutch, French, German, Modern Greek, Italian, Norwegian, Polish, Portuguese, Serbian/Croatian, Spanish, or Swedish. With permission from the director of the Center for European Studies, however, students may study other languages for their major—such as Arabic, Persian, Hindi, Hebrew, Turkish, Russian, Latin, and ancient Greek—when an application of those language skills will significantly enhance their work as distinctly European studies scholars in their track. Courses taught in English may not be used. Courses used to fulfill the European studies language requirement will be counted toward the major.

### Major

Thirty semester hours of coursework in European studies, at least twenty-four of which must be upper-division, consisting of the following. No more than nine hours of coursework counted toward the major may focus on a single country or culture.

1. European Studies 305, *Introduction to European Studies*
2. European Studies 350, *Governments and Politics of Western Europe*
3. Completion of one of the following tracks:
  - A. Track I: European studies with a focus on pre-1700 Europe
    - i Three hours in each of the following two areas:



- a. European Studies 306, *Introductory Topics in European Anthropology, Geography, History, and Sociology*; or European Studies 346, *Topics in European Anthropology, Geography, History, and Sociology*, chosen from an approved list
- b. European Studies 307, *Introductory Topics in European Culture, Literature, Art, Music, and Media*; or European Studies 347, *Topics in European Culture, Literature, Art, Music, and Media*, chosen from an approved list

ii Nine additional hours of European studies coursework chosen from an approved list, only three hours of which may be lower-division

B. Track II: European studies with a focus on post-1700 Europe

- i Three hours in each of the following three areas:
  - a. European Studies 306, *Introductory Topics in European Anthropology, Geography, History, and Sociology*; or European Studies 346, *Topics in European Anthropology, Geography, History, and Sociology*, chosen from an approved list
  - b. European Studies 307, *Introductory Topics in European Culture, Literature, Art, Music, and Media*; or European Studies 347, *Topics in European Culture, Literature, Art, Music, and Media*, chosen from an approved list
  - c. European Studies 308, *Introductory Topics in European Economics, Government, Business, and Policy*; or European Studies 348, *Topics in European Economics, Government, Business, and Policy*

ii Six additional hours of European studies coursework chosen from an approved list, only three hours of which may be lower-division

- 4. European Studies 375, *Capstone Research in European Studies*, in which the student prepares a thesis
- 5. Participation in an approved study abroad program or in an approved internship in Europe selected from a list available from the European studies faculty adviser

## Minor for European Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

## French

### Major

Twenty-four semester hours of upper-division French, including French 320E, 322E, 326K, and 326L; French 340C, 340P, or 340T; and six hours of French courses numbered 350 or above.

## Minor for French Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Geography

### Major

Thirty semester hours of geography, at least eighteen of which must be upper-division, including

1. An eighteen-hour core requirement consisting of
  - A. Geography 301C and one other course in physical geography
  - B. Geography 305 and one other course in human geography
  - C. Two geography courses in methods/techniques
2. At least nine semester hours in one of the following tracks:
  - A. Geographic information science
  - B. Cultural geography
  - C. Environmental resource management
  - D. General geography (designed for students who do not wish to specialize at the undergraduate level)
  - E. Urban geography
  - F. Earth science
  - G. Landscape ecology and biogeography

Courses used to fulfill the core geography requirement may not be counted toward the completion of a track. Lists of courses that fulfill the core geography requirement and of courses in each track are available in the Department of Geography and the Environment.

## Minor for Geography Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## German

### Major

Twenty-four semester hours of upper-division coursework in German, consisting of

1. German 328
2. Three additional semester hours in language, chosen from German 330C, 331L, and 336W
3. Nine semester hours in literature, culture, and linguistics, chosen from German 340C, 343C, 346L, and 347L
4. Six semester hours of topic seminars, chosen from German 363K, 369, and 373

5. Three additional semester hours in German, chosen from German 340C, 343C, 346L, 347L, 348D, 356W, 363K, 366K, 369, and 373

Eighteen of the twenty-four semester hours must be taken in residence. German 149T, 249T, and 349T may not be counted toward a major in German.

## Minor for German Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Government

### Major

Thirty semester hours of government, at least eighteen of which must be upper-division, including at least one upper-division course from each of three of the six fields into which the department's work is divided: (1) political theory, (2) American government and politics, (3) public and comparative law, (4) public policy, (5) comparative politics, and (6) international relations.

Government majors must also complete at least three semester hours in a tools course, chosen from Government 339L, *Research Methods in Government*; Government 341M, *Decision Theory*; Government 342N, *Public Choice*; and Government 350K, *Statistical Analysis in Political Science*.

Students may choose to satisfy the tools course requirement by completing one of the following nongovernment course options; these courses may not be counted toward the semester hours and grade point average required for the major.

1. Three semester hours of statistics chosen from Economics 329; Educational Psychology 371; Mathematics 316; Psychology 418; Social Work 318; Sociology 317L; Statistics 309; Statistics and Scientific Computation 302, 304, 305, 306
2. Three semester hours of logic, chosen from Computer Science 313K; Philosophy 312, 313, 313K, 313Q; Tutorial Course 310 (for Plan II students)
3. Six semester hours of upper-division coursework in one foreign language, excluding courses conducted in English

All government majors must earn a grade of at least C- in each course counted toward fulfillment of the major requirements. A minimum grade point average of 2.00 in courses taken at the University and counted toward the major is also required.

No more than six hours of internship coursework may be counted toward the major, including transfer credit earned in internship courses at other institutions of higher education.

No student may register for more than nine semester hours of government in one semester without the consent of an undergraduate adviser in the Department of Government.

## Minor for Government Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve hours must be taken in residence.

## History

### Major

Thirty semester hours of history, at least fifteen hours of which must be upper-division, including

1. At least six semester hours in United States history
2. At least six semester hours in European history
3. At least six semester hours in Latin American, African, Asian, or Middle Eastern history

At least three hours of non-United States history must be in upper-division coursework. All history majors must take History 350L or 350R as part of their thirty semester hours.

### Minor for History Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve semester hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

## Humanities

### Major

Forty-two semester hours, including at least thirty hours of upper-division coursework, arranged by contract in consultation with the humanities adviser. None of these forty-two hours may be counted toward the core curriculum or the prescribed work for the Bachelor of Arts degree.

Students normally enter the program in the sophomore or junior year. In developing the contract, the student and the adviser define objectives, central subject areas, and a general plan of study, structured in accordance with the student's interests. With the approval of the humanities adviser, the student chooses one of the following tracks.

1. *Track One*
  - A. Nine semester hours in a single field of study in the College of Liberal Arts
  - B. Nine hours in one or more other fields of study in the College of Liberal Arts
  - C. Nine hours in any field or fields outside the College of Liberal Arts
  - D. Nine additional hours in any field or fields at the University
  - E. Six hours of upper-division coursework in humanities, including Humanities 370

2. *Track Two*

- A. Twelve semester hours in a single field of study in the College of Liberal Arts
- B. Nine hours in a second field of study in the College of Liberal Arts
- C. Fifteen additional hours in any field or fields at the University
- D. Six hours of upper-division coursework in humanities, including Humanities 370

Students in the Humanities Honors Program must use Humanities 679HA and 679HB to fulfill requirements 1e or 2d.

## International Relations and Global Studies

### Major

Thirty-nine semester hours of coursework, at least twenty-four of which must be upper-division, consisting of the following:

1. Fifteen hours in the following five core courses in the major:
  - A. International Relations and Global Studies 301, *Introduction to International Relations and Global Studies*
  - B. A three-semester-hour course chosen from the following: Economics 301, *Introduction to Economics*; Economics 304K, *Introduction to Microeconomics*; or Economics 304L, *Introduction to Macroeconomics*
  - C. Geography 305, *This Human World: An Introduction to Geography*
  - D. World history: A three-semester-hour course in world (non-United States) history, chosen from a list of approved courses available in the advising office
  - E. A three-semester-hour course chosen from the following: Anthropology 302, *Cultural Anthropology*; Economics 304K, *Introduction to Microeconomics*; Economics 304L, *Introduction to Macroeconomics*; Radio-Television-Film 312C, *Introduction to Global Media*; Sociology 302, *Introduction to the Study of Society*
2. International Relations and Global Studies 320F, *Foundations of International Relations and Global Studies*
3. Twelve hours of upper-division coursework in one of the following tracks, chosen from a list of approved courses available in the advising office:
  - A. Culture, media, and the arts
  - B. International security
  - C. Science, technology, and environment
  - D. International political economy
4. Six hours of upper-division coursework in a single foreign language
5. International Relations and Global Studies 378, *Capstone Research in International Relations and Global Studies*; or, for students seeking special honors, International Relations and Global Studies 678H, *Honors Tutorial Course*

International relations and global studies majors must participate in an approved study abroad program. A list of approved programs is available from the faculty adviser. A student who graduated from an international high school may petition to be excused from this requirement. Documentation is required, and the petition must be approved by the faculty adviser and the associate dean for academic affairs.

## Minor for International Relations and Global Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in one of the following fields: African studies; Asian studies; European studies; Latin American studies; Middle Eastern studies; Russian, East European, and Eurasian studies; or a cultural area approved by the faculty adviser. Majors minoring in African studies must choose courses from an approved list. Six of the required twelve semester hours must be completed in residence.

## Islamic Studies

### Major

Twenty-four semester hours of coursework in Islamic studies, including eighteen hours of upper-division coursework. The coursework consists of

1. Islamic Studies 310, *Introduction to Islam*
2. Three semester hours chosen from Islamic Studies 311 (Topic 2: *Judaism, Christianity, and Islam: An Introduction*); Religious Studies 305, *Introduction to the Philosophy of Religion*; Religious Studies 310, *Introduction to the Study of Religion*
3. Nine semester hours in Islamic Studies 340, *Topics in Islam*
4. Six semester hours in Islamic Studies 372, *Topics in Islamic Cultures*
5. Three additional semester hours of upper-division coursework in Islamic studies

Students must complete the equivalent of at least two years in Arabic, Persian, Turkish, Urdu, or Yoruba. Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

## Minor for Islamic Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve semester hours must be taken in residence.

## Italian

### Major

Twenty-four semester hours of upper-division coursework in Italian, including Italian 321, 328, and 329. Three semester hours chosen from Italian civilization 349 or 360 may be counted toward this requirement.

## Minor for Italian Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Jewish Studies

### Major

Twenty-seven semester hours of coursework in Jewish studies, including Jewish Studies 304M or 304N, at least three additional hours of lower-division coursework, and eighteen hours of upper-division coursework. Students must complete six hours in each of the following areas:

1. Humanities and arts: Jewish Studies 363 and comparable courses identified by the faculty adviser
2. History and social science: Jewish Studies 364, 365, and comparable courses identified by the faculty adviser

Students are encouraged but not required to use Hebrew or Yiddish to fulfill the foreign language requirement.

### Minor for Jewish Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve semester hours must be taken in residence.

## Latin

### Major

Fifteen semester hours of upper-division coursework in Latin, including Latin 324 and at least three hours of Latin 365; and nine semester hours, including at least six hours of upper-division coursework, in Greek or classical civilization or a combination of the two.

### Minor for Latin Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Latin American Studies

All students must take the following five courses in the major:

1. Latin American Studies 301
2. Government 328L

3. Any anthropology, geography, economics, or sociology course cross-listed with Latin American studies
4. Any upper-division history course cross-listed with Latin American studies on colonial Latin America or any of its nations before independence
5. Any upper-division history course cross-listed with Latin American studies on modern Latin America or any of its nations since independence

A list of courses that meet requirements 4 and 5 is available in the Latin American studies advising office. Spanish 322K may be substituted for either the colonial or the modern Latin American history course (requirement 4 or 5), but not for both.

In addition, all Latin American studies majors must take twenty-one semester hours in a single discipline chosen from the following: anthropology, art history, business, communication, economics, geography, government, history, sociology, Portuguese, and Spanish. A concentration in another area may be organized with the approval of the Undergraduate Program Committee of the Teresa Lozano Long Institute of Latin American Studies. The twenty-one semester hours must include at least twelve hours of Latin American content coursework and at least twelve hours of upper-division coursework.

Students must complete the equivalent of at least two years in Spanish or Portuguese. Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

## Linguistics

### Major

Twenty-four semester hours of coursework in linguistics, consisting of Linguistics 306, 344K, 345, 372K, 372L, and nine additional hours of upper-division coursework in linguistics. Students should consult the undergraduate adviser for information about counting other courses toward the major requirements.

### Minor for Linguistics Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

## Mexican American Studies

1. Mexican American Studies 307, *Introduction to Mexican American Cultural Studies*; or Mexican American Studies 308, *Introduction to Mexican American Policy Studies*
2. Twenty-one semester hours of upper-division coursework in Mexican American studies, including 350 and either 361 or 362. Any upper-division Spanish course may be substituted for 350
3. Twelve additional semester hours of coursework in Mexican American studies

Students must use Spanish to fulfill the foreign language requirement.



# Middle Eastern Languages and Cultures

The major in Middle Eastern Languages and Cultures is offered with specialization in one of two tracks: literature and culture, or language.

## Major

Twenty-four semester hours, at least twenty-one of which must be upper-division, consisting of the following:

1. Middle Eastern Languages and Cultures 301
2. Middle Eastern Languages and Cultures 323
3. Six semester hours of upper-division coursework in a single Middle Eastern language, chosen from Arabic, Hebrew, Persian, or Turkish, but excluding coursework conducted in English
4. An additional twelve semester hours of upper-division coursework in one of the following tracks:
  - A. Literature and culture: Middle Eastern languages and cultures coursework in Arabic-, Hebrew-, Persian-, and Turkish-speaking cultures and literatures
  - B. Language: upper-division language coursework in Arabic, Hebrew, Persian, or Turkish; may be in a second Middle Eastern language, but excluding coursework conducted in English

## Minor for Middle Eastern Languages and Cultures Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement or the major, the twelve semester hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required twelve semester hours must be taken in residence.

# Middle Eastern Studies

## Major

Twenty-four semester hours of coursework in Middle Eastern studies, eighteen hours of which must be upper-division coursework, consisting of the following:

1. Middle Eastern Studies 301K and 301L
2. Six semester hours of upper-division coursework in a Middle Eastern language (Arabic, Hebrew, Persian, or Turkish)
3. Three semester hours of upper-division coursework in each of the following areas:
  - A. Social science: Middle Eastern Studies 341, *Topics in the Middle East: Social Science*.
  - B. Arts and humanities: Middle Eastern Studies 342, *Topics in the Middle East: Arts and Humanities*.
  - C. History: Middle Eastern Studies 343, *Topics in the Middle East: History*.

4. Three additional semester hours of upper-division coursework in Middle Eastern studies.

Students must complete the equivalent of at least two years of a Middle Eastern language (normally Arabic, Hebrew, Persian, or Turkish). Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

## Minor for Middle Eastern Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent. Six of the required semester hours must be taken in residence.

# Philosophy

## Major

Twenty-seven semester hours of philosophy, at least eighteen of which must be upper-division, including

1. Three hours of symbolic logic: Philosophy 313, 313K, or 313Q
2. Philosophy 329K or 329L, which may also be counted toward requirement 3 or 4 below
3. Three hours of ancient philosophy: Philosophy 301K or 329K
4. Three hours of early modern philosophy: Philosophy 301L or 329L
5. Six hours chosen from Philosophy 321K, 323K, 323M, 325K, and 332

## Minor for Philosophy Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required semester hours must be taken in residence.

# Portuguese

## Major

Each student must complete one of the following concentrations:

1. Portuguese: Twenty-seven semester hours of upper-division coursework in Portuguese, consisting of
  - A. Portuguese 362
  - B. Six hours of civilization/culture or linguistics chosen from the following: Portuguese 321, 341, 350K, 364L, and Portuguese Civilization 320E or 325E (Only one Portuguese civilization course may be counted toward this requirement.)
  - C. Eighteen hours of Luso-Brazilian literature chosen from Portuguese 327K, 327L, 327M, 328, 329, 352, and 375
2. Spanish and Portuguese: Thirty semester hours of upper-division coursework in Spanish and Portuguese, consisting of
  - A. Portuguese 362 and Spanish 327G

- B. Nine hours of Spanish literature, consisting of Spanish 325K or 325L, Spanish 326K or 326L, and Spanish 351 or a course numbered above 351
- C. Nine hours of Luso-Brazilian literature chosen from Portuguese 327K, 327L, 327M, 328, 329, 352, and 375
- D. Spanish 322K or 328
- E. Three hours of Luso-Brazilian civilization and culture chosen from the following: Portuguese 341, 350K, Portuguese Civilization 320E, 325E

D. Area IV: Approaches to the study of religion and comparative studies of religion

- 2. *Primary area*: Six additional hours of upper-division coursework in one of these four areas chosen in consultation with the religious studies adviser
- 3. Religious Studies 375S, *Advanced Seminars in Religious Studies*

## Minor for Portuguese Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Psychology

### Major

Twenty-eight semester hours of psychology, at least eighteen of which must be upper-division, including Psychology 301 and 418 with a grade of at least C in each. Students may take courses from a variety of areas within the field of psychology, including clinical psychology, cognition, developmental psychology, evolutionary psychology, language, neuroscience, perception, and social psychology.

Psychology majors must earn a grade of at least C in Psychology 418 to register for upper-division psychology courses. Students may not enroll in Psychology 418 more than twice.

Psychology 357 and 359 are offered on the pass/fail basis only; they may not be counted toward the twenty-eight hours in psychology required for the major.

### Minor for Psychology Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the twelve semester hours must be taken in residence.

## Religious Studies

### Major

Thirty semester hours of religious studies coursework, of which at least eighteen hours must be upper-division. A single course may not be counted toward more than one of the following requirements. The thirty hours of coursework must include

- 1. In each of the following areas, at least three semester hours chosen from a list of courses available from the religious studies adviser:
  - A. Area I: Religions of Asia
  - B. Area II: Religions of Europe, the Middle East, and Africa
  - C. Area III: Religions of the Americas

## Minor for Religious Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

## Rhetoric and Writing

### Major

Twenty-seven semester hours of coursework in rhetoric and writing, at least eighteen of which must be upper-division, consisting of

- 1. Rhetoric and Writing 306, *Rhetoric and Writing*
- 2. Rhetoric and Writing 321, *Principles of Rhetoric*
- 3. Each of the following courses (any topic):
  - A. Rhetoric and Writing 330C, *Advanced Studies in Digital Rhetoric*
  - B. Rhetoric and Writing 330D, *History of Rhetoric*
  - C. Rhetoric and Writing 330E, *Rhetorical Theory and Analysis*
- 4. Three hours chosen from Rhetoric and Writing 310, 325M, 328 (any topic), 368C, and 368E
- 5. Nine additional semester hours in rhetoric and writing, including six hours of upper-division coursework

### Minor for Rhetoric and Writing Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## Russian, East European, and Eurasian Studies

### Major

Eighteen semester hours of upper-division coursework, chosen from a list of courses approved by the Advisory Committee of the Program for Russian, East European, and Eurasian Studies. In addition, students must complete the introductory course, Russian, East European, and Eurasian Studies 301, and three years of language study in a Slavic, Central Asian, or east European language, normally Russian, Czech, Polish, or Serbian/Croatian. Credit used to fulfill this requirement may also be used to fulfill the foreign language requirement.

## Minor for Russian, East European, and Eurasian Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required semester hours must be taken in residence. If the minor is in a foreign language other than that used to fulfill the foreign language requirement, the twelve hours may be lower-division but must include at least six hours beyond course 507 or the equivalent.

## Scandinavian Studies

### Major

Twenty-four semester hours of Scandinavian, including eighteen upper-division hours, consisting of

1. Scandinavian 302
2. At least nine semester hours of coursework in language and literature chosen from Scandinavian 323, 358, 369, and 373
3. At least nine semester hours of coursework in culture and society chosen from topics of Scandinavian 327 and 335

In addition, the student must use Danish, Norwegian, or Swedish to fulfill the foreign language requirement.

### Minor for Scandinavian Studies Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Sociology

### Major

At least twenty-seven semester hours of coursework in sociology, including Sociology 302, 317L, 317M, and 379M. At least fifteen semester hours must be in upper-division courses. Sociology majors must earn grades of at least C in Sociology 302, 317L, and 317M. To enroll in Sociology 317M for a second time, a student must have the consent of a sociology undergraduate adviser. Students may not enroll in Sociology 317M more than twice.

In place of Sociology 317L, students may complete one of the following alternative courses with a grade of at least C: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. If the student completes one of these courses instead of Sociology 317L, that course is counted toward the twenty-seven hours required for the major and is included in the major grade point average.

### Minor for Sociology Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required semester hours must be taken in residence.

## Spanish

### Major

Each student must complete one of the following concentrations.

1. *Hispanic Studies*: Twenty-seven semester hours of upper-division coursework in Spanish, consisting of
  - A. Spanish 327G, 327W, and six additional hours in grammar, composition, and language chosen from Spanish 345L, 346, and 367K, with only one section of 367K counting
  - B. Nine hours in literature, including Spanish 351 or a course numbered above 351
  - C. Spanish 322K or 328, and three additional hours in civilization chosen from Spanish 322K, 328, 350, and 350K
2. *Literature*: Twenty-seven semester hours of upper-division coursework in Spanish, consisting of
  - A. Spanish 327G, 327W, and three additional hours in grammar, composition, and language chosen from Spanish 345L and 346
  - B. Twelve hours in literature, consisting of either Spanish 325K or 325L; either 326K or 326L; 351; or 365K
  - C. An additional three-hour Spanish literature course numbered above 351
  - D. Spanish 322K or 328
3. *Hispanic Linguistics*: Twenty-seven semester hours of upper-division coursework in Spanish, consisting of
  - A. Spanish 327G, 327W, 345L, and 346
  - B. Twelve hours chosen from Spanish 353, 364L, two different topics of 367K, and 368L
  - C. Three hours in literature, chosen from Spanish 325K, 325L, 326K, and 326L
4. *Language Teaching*: Twenty-seven semester hours of upper-division coursework in Spanish, consisting of
  - A. Spanish 327G, 327W, 345L, 346, 364L, and 367K (Topic 1: *Advanced Oral Expression for Teachers*)
  - B. Three hours in literature, chosen from Spanish 325K, 325L, 326K, and 326L
  - C. Spanish 322K or 328
  - D. Three hours of Spanish literature, numbered Spanish 351 or higher, or Spanish 368L, *Spanish Language Structure*

### Minor for Spanish Majors

Either (1) twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University; or (2) nine semester hours of coursework beyond 507 or the equivalent in a second foreign language, including at least three hours of upper-division coursework. Six of the required semester hours must be taken in residence.

## Urban Studies

The Urban Studies degree program is administered by the Department of Geography and the Environment. Students must be admitted to the

degree program. They may apply for admission after completing the following requirements: Mathematics 408C or 408K with a grade of at least B-; Mathematics 316 or Statistics and Scientific Computation 305 with a grade of at least B-. Other comparable courses may be used if approved.

## Major

Twenty-four semester hours of coursework, consisting of

1. Urban Studies 301, 315, and 360
2. Urban Studies 370 or an approved equivalent course
3. Twelve additional hours of upper-division coursework in urban studies

## Minor for Urban Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## Women's and Gender Studies

### Major

Thirty semester hours of coursework in women's and gender studies, eighteen hours of which must be upper-division. It is recommended that six semester hours be taken in women's and gender studies courses originating from outside the College of Liberal Arts. The thirty required semester hours must include the following:

1. *Women's and Gender Studies 301, Introductory Topics in Women's and Gender Studies*, or *Women's and Gender Studies 305, Introduction to Women's and Gender Studies*
2. Six hours in *Women's and Gender Studies 340, Cross-Cultural Topics in Women's and Gender Studies*
3. *Women's and Gender Studies 350, Feminist Theory*, or another feminist theory course chosen from a list of courses approved by the Center for Women's and Gender Studies
4. *Women's and Gender Studies 356, Introduction to Feminist Research Methods*, or another research methods course chosen from a list of courses approved by the Center for Women's and Gender Studies
5. *Women's and Gender Studies 379L, Internship in Women's and Gender Studies*, or *Women's and Gender Studies 360, Research and Thesis in Women's and Gender Studies*
6. *Women's and Gender Studies 379S, Senior Seminar*

### Minor for Women's and Gender Studies Majors

Twelve semester hours, including at least six hours of upper-division coursework, in any one other field of study in the University. Six of the required twelve semester hours must be taken in residence.

## Bachelor of Arts, Plan II

The Plan II Honors Program is designed to provide a broad, liberal, and challenging education for a limited number of students whose high school class standing and admission test scores indicate strong

academic potential and motivation. The enrollment in Plan II is limited; admission to the program is separate from and in addition to admission to the University. Application materials and information about deadlines are available online at <http://www.bealonghorn.utexas.edu/>. Transfer students may apply for admission, but an overall grade point average of at least 3.80 is required, and it is the policy of Plan II not to consider applicants who will have earned more than thirty semester hours of college credit at the time of proposed entry into the program.

The Plan II Honors Program includes the basic coursework required of Plan I students, but much of this work is done in small sections that are restricted to Plan II students and taught by professors selected for their excellent teaching records. Additional required courses explore the humanities, the natural sciences, and the social sciences and provide considerable opportunity for individual research, writing, and speaking. The remainder of the student's program is made up of approved electives.

The academic programs of most Plan II students include thirty-six semester hours or more of elective coursework. The student may use electives to pursue a second major in the College of Liberal Arts or the College of Natural Sciences. Dual degree programs are available in conjunction with most other undergraduate colleges.

Qualified students who are accepted into both the Plan II Honors Program and the Cockrell School of Engineering may pursue a curriculum leading to both the Bachelor of Arts, Plan II, and a bachelor's degree in engineering. Students interested in this dual degree program must apply both to Plan II and to the Cockrell School. Further information is available from the director of Plan II and from the Office of Student Affairs in the Cockrell School.

Qualified students who are accepted into both the Plan II Honors Program and the McCombs School of Business may pursue a curriculum leading to both the Bachelor of Arts, Plan II, and the Bachelor of Business Administration. Students interested in this dual degree program must apply both to Plan II and to the McCombs School of Business. Further information is available from the director of Plan II and from the McCombs School.

A dual degree program is also available that leads to the degrees of Bachelor of Arts, Plan II, and Bachelor of Architecture. Students must apply both to Plan II and to the School of Architecture. Additional information is available from the director of Plan II and from the School of Architecture.

In addition to the following requirements, the student must fulfill the University's General Requirements (p. 18) and the requirements of the College of Liberal Arts given in Special Requirements of the College (p. 292).

## Special Requirements

Students who fail to maintain a University grade point average of at least 3.25 will be considered for academic dismissal from Plan II. All students whose grade point average falls below 3.25 but not below 2.50 will be put on academic review. Students whose grade point average falls below 2.50 at any point after their first semester in Plan II will be dismissed from the program. In addition, any student who fails one of the following required courses will be dismissed from the program: English 603A, 603B, Philosophy 610QA, 610QB, Social Science 301, Tutorial Course 302, 603A, 603B, 357, 359T, 660HA, 660HB. Students may only register for Tutorial Course 660H or 359T if their University grade point average is 3.25 or higher. All of these stipulations may be appealed and exceptions may be made on a case-by-case basis by the director of Plan II in consultation with



the associate director, assistant director, and academic advisers. A student who is academically dismissed from the Plan II program is eligible to continue to enroll in the College of Liberal Arts in another academic program if the student fulfills the academic requirements for the Bachelor of Arts, Plan I, and the scholastic standards for continuance in the University given in *General Information* (<http://registrar.utexas.edu/catalogs>). Students in scholastic difficulty should discuss their problems with a Plan II academic adviser and the director.

## Choice of Work

A degree program must include at least 120 semester hours, including at least thirty-six hours of upper-division coursework. Without special permission from the director and the dean, no more than thirty-six hours in one field of study in the College of Liberal Arts or the College of Natural Sciences and no more than thirty-six hours in courses offered in any other college or school may be counted toward the degree.

Plan II students may use credit by examination to fulfill certain program requirements. More information on testing policies and credit by examination is available from a Plan II academic adviser.

Tutorial Course 302 and two semesters of Tutorial Course 357 are required. Tutorial Course 660H is required of students seeking special honors in Plan II, students pursuing the Plan II degree alone, and students writing creative theses. In exceptional situations, students completing dual degree programs may be approved by the Plan II associate director to enroll in Tutorial Course 359T, *Essay Course*, in lieu of Tutorial Course 660H. Other requirements for the Bachelor of Arts, Plan II, are outlined below. All courses offered in the Plan II Honors Program are subject to approval by the Plan II Faculty Advisory Committee; in some areas the committee will prescribe certain courses for all students in the program. Current information on these matters is available in the Plan II office.

All students must complete the University's Core Curriculum (p. 22). In the process of fulfilling the core curriculum and other degree requirements, all students are expected to complete courses with content in the following three areas:

1. Writing: two flagged courses beyond Rhetoric and Writing 306 or its equivalent
2. Global cultures: one flagged course
3. Cultural diversity in the United States: one flagged course

Courses with sufficient content in these areas will be identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), by the appropriate flags. A course may carry more than one flag. The School of Undergraduate Studies monitors flagged courses to ensure that they meet the guidelines set by the General Faculty.

The following are the specific requirements of the Plan II program. In some cases, a course that is required for the BA, Plan II, may also be counted toward the core curriculum; these courses are identified below.

1. English 603 or Tutorial Course 603. Either course also meets the English composition and humanities requirements of the core curriculum.

2. Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
3. Students must complete four semesters or the equivalent in a single foreign language. The foreign language requirement is the attainment of certain proficiency, as well as the completion of a specified number of courses; however, the courses taken to gain this proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

To achieve proficiency in a foreign language as rapidly as possible, qualified students are encouraged to take intensive foreign language courses. Information about these courses is available from the departments that offer them.

Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.

4. Social Science 301. This course also meets the social and behavioral sciences requirement of the core curriculum.
5. Six semester hours of non–United States history in the same geographic area.
6. Eighteen semester hours of coursework as outlined below. To satisfy the core curriculum and the mathematics and natural science requirement of the BA, Plan II, a student may count (1) no more than twelve hours in mathematics, computer science, and statistics and scientific computation combined; and (2) no more than nine hours in any single field of study. Substitutions do exist for some of the requirements outlined below; each Plan II student should meet with a Plan II academic adviser to discuss her/his individual academic plan.
  - A. Mathematics 310P. This course also meets the mathematics requirement of the core curriculum. Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward this requirement. Students who enter the University with fewer than three units of high school mathematics at the level of Algebra I or higher must take Mathematics 301 or 303D without degree credit to remove their deficiency.
  - B. A three-hour course in logic or modes of reasoning designated for Plan II students, currently Tutorial Course 310 or a section of Philosophy 313Q.
  - C. Six hours of coursework in astronomy, biology, chemistry, geological sciences, physical science, or physics. This coursework may be used to fulfill the science and technology, part I, requirement of the core curriculum.
  - D. Biology 301E and Physics 321. Either of these courses may also be used to fulfill the science and technology, part II, requirement of the core curriculum. A three-hour course in astronomy, chemistry, or geological sciences designated for Plan II students may be taken in place of Physics 321.
  - E. Any remaining courses needed to provide eighteen hours of work must be chosen from the following fields. No more than three hours may be in the history of science or the philosophy of science. A list of approved alternative courses (items 10 and 11) is available in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

- i Astronomy
- ii Biology
- iii Chemistry
- iv Geological sciences
- v Marine science
- vi Nutrition
- vii Physical science
- viii Physics
- ix Mathematics, computer science, and statistics and scientific computation
- x Other alternative science courses approved by the dean
- xi Approved alternative courses in history of science and philosophy of science

7. Philosophy 610Q.

8. An approved three-hour course in art history, music history, or history of theatre and dance; or a three-hour upper-division course in classical civilization, humanities, literature, or philosophy.

## Electives

In addition to the core curriculum and the preceding specific requirements, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of conference courses and internship courses combined as described in Conference Courses and Internship Courses (p. 293); twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; nineteen hours completed on the pass/fail basis; thirty-six hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences; and thirty-six hours in any other single college or school of the University. Mathematics courses at the level of college algebra may not count toward elective hours.

## Order of Work

The usual order of work for students in Plan II is outlined below, although it is possible to make exceptions when there is good reason for doing so. There is some variation in the order of work for students in premedical, pre dental, and dual degree programs, for teacher certification candidates, and for students concentrating in science. Students in these areas should consult the director or an academic adviser.

## Suggested Four-Year Plan

*First Year:*

- Tutorial Course 603 or English 603
- Biology 301E, Mathematics 310P, and Philosophy 313Q or Tutorial Course 310
- Six semester hours of non–United States history
- Foreign language courses
- Tutorial Course 302
- A three-semester-hour elective

*Second Year:*

- Philosophy 610Q
- Three semester hours in mathematics or natural science
- Government 310L and 312L
- Foreign language courses
- Social Science 301
- A three-semester-hour elective

*Third and Fourth Years:*

- Three semester hours in the visual and performing arts
- Three semester hours of humanities or courses in the history of fine arts
- Six semester hours of American history
- Six semester hours of Tutorial Course 357
- Tutorial Course 359T or 660H
- Physics 321 and three additional hours of science
- Elective courses sufficient to make a total of at least 120 semester hours, with only upper-division courses usually being approved for third- and fourth-year students

## Bachelor of Science in Environmental Science

The Bachelor of Science in Environmental Science degree program is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; to perform field, laboratory, and computer analyses; and to conduct original research. The program is designed to prepare graduates for careers in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School of Geosciences with a major in geological sciences, by the College of Liberal Arts with a major in geographical sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given in The Bachelor of Science in Environmental Science (p. 284).

The BSEnviroSci curriculum consists of 126 semester hours of coursework. All students must complete the University's Core Curriculum. The specific requirements consist of prescribed work, major requirements, and electives. In some cases, a course that is required for the degree may also be counted toward the core curriculum. In addition, for the major in geographical sciences, courses used to fulfill the University core curriculum requirements

or the prescribed work below may also be counted toward the major requirements where applicable.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills one requirement may also be used to fulfill a flag requirement.

In the process of fulfilling the core curriculum and other degree requirements, all students are expected to complete courses with content in the following three areas:

1. Writing: two flagged courses beyond Rhetoric and Writing 306 or its equivalent
2. Global cultures: one flagged course
3. Cultural diversity in the United States: one flagged course

Courses with sufficient content in these areas will be identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), by the appropriate flags. A course may carry more than one flag. The School of Undergraduate Studies monitors flagged courses to ensure that they meet the guidelines set by the General Faculty.

The student must fulfill the University's General Requirements (p. 18) for graduation given and the requirements of the College of Liberal Arts given earlier in this section. Graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded. In addition, a grade of at least C- is required in each mathematics and science course specifically required by the degree.

More information about grades and the grade point average is given in *General Information*.

## Prescribed Work

1. Mathematics: Mathematics 408C, or 408N and 408S
2. Chemistry: Chemistry 301 or 301H; 302 or 302H; and 204
3. Physics: 317K and 117M, or another four-hour calculus-based physics sequence
4. Biological sciences: Biology 311C and 311D, or 315H
5. Ecology: Biology 373 and 373L, or Marine Science 320 and 120L or 152T (Topic: *Marine Ecology*) (Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10.)
6. Geological sciences: Geological Sciences 401 or 303, 346C, and an approved geological sciences course in sustainability
7. Geography: Geography 335N
8. Field experience: One course in each of the following areas
  - A. Introductory field seminar: Environmental Science 311
  - B. Senior field/research experience: Environmental Science 371, Geography 373F, 373K
9. Research methods: Environmental Science 331
10. Environmental and sustainability themes: One course in each of the following thematic areas:
  - A. Environmental and sustainability policy, ethics, and history: Geography 334, 336C, 340D, 342C, 356C, 356T (approved topics), Philosophy 325C
  - B. Geographic information systems: Geography 360G, 462K, Geological Sciences 327G

- C. Climates and oceans: Biology 456L, Geography 333K, 356T (approved topics), Geological Sciences 371C (approved topics), 377P, Marine Science 320, 440, 354Q, 354T, 367K (Marine Science 320 may not be used to satisfy both requirement 5 and requirement 10.)
- D. Environmental economics, sustainability, and business: Economics 304K, 330T

11. Environmental Science 141 and 151

## Additional Prescribed Work

1. *Writing and Literature*: English 316K and two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language/culture*: One of the following foreign language/culture choices:
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area chosen from a list of approved courses available in the Student Division or from the undergraduate adviser.

Courses taken to attain a certain level of proficiency in a foreign language are not electives and cannot be taken on the pass/fail basis.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core curriculum. Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Cultural expression, human experience, and thought*: Three semester hours of approved coursework. The course must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

## Major Requirements

The following thirty semester hours of coursework are required; these hours must include at least eighteen hours of upper-division coursework.

1. Geography 301C and 304E
2. Twenty-four additional hours of coursework in geography, selected from Geography 301K, 333C, 333K, 334C, 334K, 335C, 335K, 335N, 338C, 339, 346, 356T (approved topics), 357, 360G, 462K, 464K, 366C, 366K, 367K, 470C, and 476T (approved topics)
3. A grade point average of at least 2.00 in the thirty hours of geography coursework required for the major

## Electives

In addition to the core curriculum, prescribed work, additional prescribed work, and major requirements, the student must complete enough elective coursework to provide the 126 semester hours required for the degree. These 126 hours may include no more than twelve hours of conference courses and internship courses combined as described in Conference Courses and Internship Courses (p. 293); twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-six hours in any one field of study offered in the College of Liberal Arts or the College of Natural Sciences, unless major requirements state otherwise; and thirty-six hours in courses offered in any other single college or school of the University. Mathematics courses at the level of college algebra may not count toward elective hours.

## Bachelor of Science in Psychology

As an alternative to the Bachelor of Arts degree, the Bachelor of Science in Psychology is designed to offer students a more extensive scientific program that may better prepare them for graduate study or employment in research fields. Students interested in mathematics-based or physiology-based areas of psychology have the opportunity to develop more breadth and depth in the fields that complement their area of interest within psychology. To accomplish this goal, the curriculum for the Bachelor of Science in Psychology puts more emphasis on natural sciences and less on language arts.

A student may not earn both the Bachelor of Arts with a major in psychology and the Bachelor of Science in Psychology.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including eighteen hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. Provided these residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to sixteen semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

Students in this degree program may pursue any of the honors programs available to Bachelor of Arts, Plan I, students. These

programs are described in the section Liberal Arts Honors Programs, Plan I (p. 284).

All students must complete the University's Core Curriculum. In the process of fulfilling the core curriculum and other degree requirements, all students are expected to complete courses with content in the following three areas:

1. Writing: two flagged courses beyond Rhetoric and Writing 306 or its equivalent
2. Global cultures: one flagged course
3. Cultural diversity in the United States: one flagged course

Courses with sufficient content in these areas will be identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), by the appropriate flags. A course may carry more than one flag. The School of Undergraduate Studies monitors flagged courses to ensure that they meet the guidelines set by the General Faculty.

The specific requirements for the Bachelor of Science in Psychology consist of prescribed work, the major, the minor, and electives. Only in the following cases may a single course be counted toward more than one requirement:

1. A course that fulfills a core curriculum requirement may also be counted toward any specific requirement of the BSPsy unless otherwise stated below.
2. Courses counted toward the prescribed work may also be counted toward the major.
3. Up to three hours of coursework counted toward the prescribed work or toward the core curriculum may also be counted toward the minor.
4. A course that fulfills another requirement may also be used to fulfill a flag requirement.

The student must fulfill the University's General Requirements (p. 18) for graduation and the requirements given in the sections Special Requirements of the College of Liberal Arts (p. 292) and Applicability of Certain Courses (p. 292). University graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded; for this degree, the student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward the major requirement.

More information about grades and the grade point average is given in *General Information* (<http://registrar.utexas.edu/catalogs/>).

## Prescribed Work

1. *Writing and Literature*: English 316K and two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language/culture*: Students must complete one of the following options:
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.



- B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
- C. Two three-hour foreign culture courses chosen from a list available in the college's Student Division and the Department of Psychology.

Courses taken to attain the required level of proficiency in a foreign language are not electives and may not be taken on the pass/fail basis.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core curriculum.

Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Mathematics and natural science*: At least twenty-five semester hours of coursework as outlined below. Some of the courses that fulfill this requirement may also be counted toward the requirements of the core curriculum. No course may be counted toward both requirement 4c and 4d.
- A. Mathematics 408C or 408K or a more advanced calculus course
  - B. Mathematics 316 or a more advanced mathematics course in probability
  - C. Sixteen to eighteen hours, consisting of two of the following sequences:
    - i Biology 311C, 311D, and 325
    - ii Chemistry 301, 302, and 204
    - iii Computer Science 303E, 313E, and one of the following: Computer Science 323E, 324E, 326E, 327E, 329E
    - iv Physics 317K, 117M, 317L, and 117N; or 301, 101L, 316, and 116L; or 303K, 103M, 303L, and 103N; or 302K, 102M, 302L, and 102N
  - D. One of the following:
    - i Three additional hours in mathematics. Mathematics 301, 302, 303D, 303F, 316K, and 316L may not be used to fulfill this requirement.
    - ii Three hours in biology, chemistry, computer science, or physics. Only the courses listed in requirement 4c above and more advanced courses may be used to fulfill this requirement.

5. *Cultural expression, human experience, and thought*: Three semester hours of approved coursework. The course must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

## The Major

Twenty-eight semester hours of psychology, including Psychology 301 and 418, each with a grade of at least C, and at least eighteen semester hours of upper-division coursework. Of these twenty-eight hours, eighteen hours, including Psychology 418 and at least six hours of upper-division coursework, must be completed in residence at the University. Also included in these twenty-eight hours must be at least six hours in each of the following two categories. A list of the courses in each area is available at <http://www.psy.utexas.edu/> and in the Department of Psychology Undergraduate Office.

1. Clinical/social/developmental/evolutionary psychology
2. Cognition/language/neuroscience/perception

Psychology majors must earn a grade of at least C in Psychology 418 to register for upper-division psychology courses. Students may not enroll in Psychology 418 more than twice.

Psychology 357 and 359 may not be counted toward the twenty-eight hours in psychology required for the major.

## The Minor

Twelve semester hours, including at least six hours of upper-division coursework, in any one field of study other than psychology. Six of the twelve hours must be taken in residence.

Additional restrictions may be imposed by the academic department in which the student completes the minor; before planning to use courses to fulfill the minor requirement, the student should also consult the department or program that offers them.

## Electives

In addition to the core curriculum, prescribed work, major, and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve hours of conference courses and internship courses combined as described in Conference Courses and Internship Courses (p. 292); twelve hours of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-six hours in any one field of study in the College of Liberal Arts or the College of Natural Sciences (including psychology); and thirty-six hours in any other single college or school of the University. Mathematics courses at the level of college algebra may not count toward elective hours.

## Courses

The faculty has approval to offer the following courses in the academic years 2012-2013 and 2013-2014; however, not all courses are taught

each semester or summer session. Students should consult the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Liberal Arts

### Liberal Arts: L A

#### Lower-Division Courses

##### L A 101L. Introduction to the Liberal Arts.

Topics related to exploring the various disciplines in the College of Liberal Arts. One lecture hour a week for one semester, or as required by the topic. Some sections are offered on the pass/fail basis only and some sections are offered on the letter-grade basis only. May be repeated for credit when the topics vary.

##### L A 302. Critical Thinking Seminar.

An examination of fundamental concepts in critical thinking, including the role of intellectual virtues, an analysis of the elements of thought, Socratic thinking, and the application of universal intellectual standards. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Liberal Arts 302 and Natural Sciences 302 may not both be counted. May not be repeated for credit.

##### L A 104R. Community Service.

Restricted to recipients of the Rapoport Service Scholarship. Tutorial course, in which students submit reports based on service learning and appropriate supplementary reading. The equivalent of one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

**Topic 1: Leadership, Ethics, and Society.**

**Topic 2: Civic Engagement and Civic Responsibility.**

##### L A 110. Internship.

Restricted to students in the College of Liberal Arts. Students work in a professional environment and apply analysis, communication, and other academic skills to practical work. The equivalent of one lecture hour and ten hours of fieldwork a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Completion of at least thirty semester hours of coursework, a University grade point average of at least 2.25, and consent of instructor.

##### L A 119, 219, 319. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Liberal Arts 119, 219, 319 and Undergraduate Studies 119 may not both be counted unless the topics vary. Liberal Arts 119, 219, 319 and 129, 229, 329 may not both be counted. May

be repeated for credit when the topics vary. Offered on the letter-grade basis only.

## Upper-Division Courses

### L A 320. Internship.

Designed to establish the academic foundations of an internship course in the liberal arts. Students integrate knowledge derived from their academic studies with the experiences gained in an internship setting. The equivalent of three lecture hours and ten hours of fieldwork a week for one semester. May be repeated for credit. Prerequisite: Completion of at least thirty semester hours of coursework, a University grade point average of at least 2.25, and consent of instructor.

### L A 220L, 320L, 420L, 520L, 620L. Military Leadership Internship.

Restricted to students participating in an approved ROTC program. Field leadership training program. For each semester hour of credit earned, one week of full-time fieldwork. Some programs may also require classroom hours. Offered during the summer session only. No more than six semester hours of this course may be counted toward any degree. Offered on the pass/fail basis only. Prerequisite: Upper-division standing.

### L A 125, 225, 325. Topics in the Liberal Arts.

Analysis of topics in the philosophy and real-life application of the liberal arts. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Additional meeting times may be required. Some sections are offered on the letter-grade basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites vary with the topic and are given in the Course Schedule.

### L A 129, 229, 329. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Liberal Arts 129, 229, 329 and Undergraduate Studies 119 may not both be counted unless the topics vary. Liberal Arts 119, 219, 319 and 129, 229, 329 may not both be counted. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### L A 131R, 231R, 331R. Research Internship.

Restricted to students in the College of Liberal Arts. For every semester hour of credit earned, three hours of fieldwork a week for one semester. May be repeated for credit, but no more than six hours may be counted toward degree requirements. Prerequisite: Upper-division standing, a grade point average of at least 2.50, and written consent of instructor.

### L A 371. Texas Interdisciplinary Plan Seminar.

Restricted to students in the Texas Interdisciplinary Plan. An analysis of interdisciplinary themes within the arts and sciences through reading, research, discussion, and writing. Three lecture hours a week for one semester, with additional hours to be arranged. Liberal Arts 371 and Natural Sciences 371 may not both be counted. May not be

repeated for credit. Prerequisite: Upper-division standing and consent of the Texas Interdisciplinary Plan adviser.

## Liberal Arts Honors

### Liberal Arts Honors: LAH

#### Lower-Division Courses

##### LAH 102H, 202H, 302H. The Idea of the Liberal Arts.

Restricted to students in the Freshman Honors Program in the College of Liberal Arts. An overview of the liberal arts disciplines. One, two, or three class hours a week for one semester. Additional hours may be required. Offered on the pass/fail basis only.

##### LAH 305. Liberal Arts Freshman Honors Seminar.

Restricted to students in the Freshman Honors Program in the College of Liberal Arts. Intensive small class lecture or seminar course addressing basic issues in various liberal arts disciplines. Lectures, readings, discussions, examinations. Three lecture hours a week for one semester. Humanities 305 and Liberal Arts Honors 305 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

**Topic 1: Reacting to the Past.** Liberal Arts Honors 305 (Topic 1) and 305 (Topic: Reacting to the Past) may not both be counted. Offered on the letter-grade basis only.

##### LAH 112H. The Nature of Inquiry.

Designed for students who plan to enter a liberal arts departmental honors program. Introduction to the nature of research in liberal arts disciplines. One and one-half class hours a week for one semester. Prerequisite: Forty-five semester hours of coursework and consent of the liberal arts honors director.

##### LAH 316. Studies in the Liberal Arts.

Restricted to Plan I majors in the College of Liberal Arts. Intensive lecture or seminar course addressing topics in various liberal arts disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

##### LAH 318Q. Supervised Research.

Individual instruction. Prerequisite: Consent of the liberal arts honors program adviser.

#### Upper-Division Courses

##### LAH 350. Topics in the Liberal Arts.

Restricted to Plan I majors in the College of Liberal Arts. Intensive lecture course treating topics from a variety of disciplinary perspectives, taught by instructors from various departments. Lectures, readings, discussions, examinations. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 358Q. Supervised Research.

Individual instruction. May be repeated for credit, but no more than six semester hours may be counted toward College Honors. Prerequisite:

A University grade point average of at least 3.50 and consent of the liberal arts honors program adviser.

##### LAH 364H. The Enlightenment.

Restricted to Plan I majors in the College of Liberal Arts. Examination of the European Enlightenment, an intellectual movement centered in eighteenth-century France and England that cut across all disciplines and arts and that looked back to the Renaissance and forward to the modern world. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 365H. Great Books in Political Philosophy.

Restricted to Plan I majors in the College of Liberal Arts. An investigation of what it means to think "philosophically" about politics and morals, by reading and interpreting primary sources of political philosophy from more than twenty centuries. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 368H. Literature of the Hispanic World.

Restricted to Plan I majors in the College of Liberal Arts. An examination of the literature and culture of Spain and Spanish America, from the Middle Ages to the present. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 369H. Comparative Legal Systems.

Restricted to Plan I majors in the College of Liberal Arts. A comparison of legal traditions from Europe, English common law, and Asia. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 370H. The Birth of the Modern World, 1400-1700.

Restricted to Plan I majors in the College of Liberal Arts. An interdisciplinary course on European culture during the age of the Renaissance and Reformation. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 371H. Classics of Greek Philosophy.

Restricted to Plan I majors in the College of Liberal Arts. A close reading of major works in the philosophy of Plato and Aristotle, supported by background reading in the history and literature of ancient Greece. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 373H. Literature of the Western World: Continuities.

Restricted to Plan I majors in the College of Liberal Arts. Tradition and innovation of form and thought in literature from Homer to the twentieth century. Three lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

##### LAH 376H. The Rise of Modern America.

Restricted to Plan I majors in the College of Liberal Arts. The end of Reconstruction (1877) to the end of the war in Vietnam (1975)-- industrialization, urbanization, immigration, nuclear energy, and global reach. Three lecture hours a week for one semester. Offered on the

letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

### **LAH 377H. Ideas of the Twentieth Century.**

Restricted to Plan I majors in the College of Liberal Arts. Central philosophical controversies of the twentieth century: ethics, politics, comparative religions, science and human nature. Three lecture hours and one discussion hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

### **LAH 378H. The Natural Sciences in the Liberal Arts Context.**

Restricted to Plan I majors in the College of Liberal Arts. An attempt to understand contemporary developments in science by focusing on the history and philosophy of science. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

### **LAH 379H. Classical Asian Civilizations.**

Restricted to Plan I majors in the College of Liberal Arts. An examination of the contributions of India and China to intellectual history. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and a grade point average of at least 3.50.

### **LAH 679T. Honors Thesis.**

Restricted to Plan I majors in the College of Liberal Arts. Supervised research, reading, and writing of a substantial paper on an interdepartmental subject. Conference course for two semesters. Offered on the letter-grade basis only. Prerequisite: For Liberal Arts Honors 679TA, upper-division standing, a grade point average of at least 3.50, and written consent of the director of the Liberal Arts Honors Program; for 679TB, Liberal Arts Honors 679TA.

## **Department of African and African Diaspora Studies**

### **African and African Diaspora Studies: AFR Lower-Division Courses**

#### **AFR 301. African American Culture.**

Survey of African American culture in the United States. Three lecture hours a week for one semester.

#### **AFR 303. Introduction to African and African Diaspora Studies.**

Introduction to canonical black studies literature, themes, and theories. Three lecture hours a week for one semester.

#### **AFR 310K. Introduction to Modern Africa.**

Same as History 310. Introduction to modern Africa, with focus on colonial and postcolonial development in political organization, economics, sociolinguistics, and literature. Three lecture hours a week for one semester.

#### **AFR 310L. Introduction to Traditional Africa.**

Same as History 311K. Introductory, interdisciplinary course on the peoples and cultures of Africa. Three lecture hours a week for one semester.

#### **AFR 317. Special Topics in African and African American Issues.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Music of African Americans.** Same as Music 307 (Topic 1: Music of African Americans). Three lecture hours a week for one semester, with one laboratory hour a week as required.

**Topic 5: Africa: A Visual Journey.** Same as History 306N (Topic 8: Africa: A Visual Journey). A broad introduction to key themes in African history and culture, from earliest times to the postindependence era. Designed around the video series *The Africans*. Three lecture hours a week for one semester.

#### **AFR 317C. Special Topics in African Studies.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The United States and Africa.** Same as History 317L (Topic 7: The United States and Africa). History of political, economic, and cultural relations between the United States and Africa from the early origins of the slave trade to the present. Only one of the following may be counted: African and African Diaspora Studies 317 (Topic: United States and Africa) and 317C (Topic 1), History 317L (Topic 7). Partially fulfills legislative requirement for American history.

#### **AFR 317D. Special Topics in Black United States Studies.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester, with one additional laboratory hour a week if required by the topic. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Introduction to African American History.** Same as History 317L (Topic 3: Introduction to African American History). Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 317 (Topic: Introduction to African American History) and 317D (Topic 1), History 317L (Topic 3). Partially fulfills legislative requirement for American history.

**Topic 2: Anthropology of Race and Ethnicity: An Introduction.** Same as American Studies 315D and Anthropology 310L (Topic 2: Anthropology of Race and Ethnicity: An Introduction). Examines the social importance of race and ethnicity both in America and around the world. Only one of the following may be counted: African and African Diaspora Studies 317D (Topic 2) and American Studies 315 (Topic: Anthropology of Race and Ethnicity), 315D, Anthropology 310L (Topic 2).

**Topic 3: The Black Power Movement.** Same as History 317L (Topic 9: The Black Power Movement). Examines the major organizations, key figures, and ideologies of the Black Power



movement from the late 1960s and early 1970s. Partially fulfills legislative requirement for American history.

### **AFR 317E. Special Topics in the African Diaspora.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **AFR 317F. Special Topics in Black Expressive Culture.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: African American Literature and Culture.** Same as English 314V (Topic 1: African American Literature and Culture). Introduces key tools of literary analysis through the study of African American literature. Drawn from a variety of genres and periods, the texts indicate the range of African American experiences and how those experiences are influenced by issues such as class, ethnicity, gender, sexuality, and race. Only one of the following may be counted: English 314V (Topic 1), African and African Diaspora Studies 317 (Topic 1: African American Literature and Culture), 317F (Topic 1). Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

### **AFR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in African and African Diaspora Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for African and African Diaspora Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **AFR 320. Issues in African and African Diaspora Studies.**

Three lecture hours a week for one semester. African and African Diaspora Studies 320 and 372C may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Introduction to the Study of African American English.** Same as Linguistics 325. African American English: evolution, contemporary styles, comparison with other ethnic dialects; attitudes toward African American English, effects in education, controversy about dialect differences and intellectual abilities.

**Topic 3: Race and the Criminal Justice System.** Same as Anthropology 324L (Topic 38: Race and the Criminal Justice System). Social classes, ethnic and racial groups, and their distribution in the urban landscape.

### **AFR 321. The African Diaspora in the Americas.**

Same as Anthropology 324L (Topic 9: The African Diaspora in the Americas). Black cultures and societies in the New World, and their African heritage. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 321L. Sociology of Education.**

Same as Sociology 321L and Women's and Gender Studies 345 (Topic 23: Sociology of Education). Education as a societal institution, with emphasis on the United States educational system: how the system works; the effects of the system; recent changes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 321M. Race and Popular American Culture.**

Same as Radio-Television-Film 359 (Topic 2: Race and Popular American Culture) and Sociology 321M. The intersection of African American racial politics and the changing popular media industry, especially film, music, and television. Three lecture hours a week for one semester. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing.

### **AFR 322. Introduction to African Prehistory.**

Same as Anthropology 324L (Topic 7: Introduction to African Prehistory). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 323. The Male in African American Culture and Society.**

Same as Anthropology 324L (Topic 18: The Male in African American Culture and Society). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in African and African Diaspora Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for African and African Diaspora Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **AFR 345. History of East Africa.**

Same as History 359P. A survey of the history of Kenya, Tanzania, and Uganda from prehistoric times to the postindependence era. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 345C. History of West Africa.**

Same as History 359R. A history of the West Africa region: the rise and fall of kingdoms, relations with Europe and Asia, the great revolutions of the nineteenth century, colonial administration, decolonization, and the search for economic development and political stability since independence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 357C. African American History to 1860.**

Same as American Studies 321E and History 357C. Review of West African origins; New World settlement patterns, social life, and culture; discussion of the Atlantic slave trade, the development of capitalism and plantation slavery, and the origins of racism. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 357C, American Studies 321 (Topic: African American History to 1860), 321E, History

357C. Partially fulfills legislative requirement for American History. Prerequisite: Upper-division standing.

#### **AFR 357D. African American History since 1860.**

Same as American Studies 321F, History 357D, and Urban Studies 353 (Topic 1: African American History since 1860). Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 357D, American Studies 321 (Topic: African American History since 1860), 321F, History 357D, Urban Studies 353 (Topic 1). Partially fulfills legislative requirement for American History. Prerequisite: Upper-division standing.

#### **AFR 358C. Sociology of Entrepreneurship.**

Same as Management 337 (Topic 16: Sociology of Entrepreneurship) and Sociology 358C. Examines the creation of entrepreneurial activities in the United States, including those of all racial and ethnic groups. Three lecture hours a week for one semester. Prerequisite: For management majors, one of the following courses with a grade of at least C-, or two of the following courses with a grade of at least C- in each: Management 336, 336H, Operations Management 335, 335H; for others, sixty semester hours of college coursework.

#### **AFR 359N. History of Africa since 1800.**

Same as History 359N. Development of sub-Saharan Africa from the end of the slave trade to independence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **AFR 361K. Performing Race: African American Literary Performance.**

Study of the criticism and performance of modern African American drama. Three lecture hours a week for one semester. African and African Diaspora Studies 361K and 374 (Topic: Performance of Dramatic Literature: African American Writers) may not both be counted. Prerequisite: Upper-division standing.

#### **AFR 365. Politics in Contemporary Africa.**

Same as Government 365N (Topic 1: Politics in Contemporary Africa). Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **AFR 372C. Topics in Critical Black Studies.**

Explores the history, foundational ideas, and subsequent theoretical developments that guide contemporary black studies. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372C, 374, 374C, 374D, 374E, 374F. Some topics partially fulfill the legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 2: Race and Beauty in American Culture.** Same as History 350R (Topic 11: Race and Beauty in American Culture). Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 2), 374D (Topic 1: Race and Beauty in American Culture), History 350L (Topic 52: Race and Beauty in American Culture), 350R (Topic 11). Partially fulfills legislative requirement for American history. Additional prerequisite: Six semester hours of coursework in history.

**Topic 3: Property in American Culture.** Same as American Studies 370 (Topic 38: Property in American Culture). Explores American conceptions of property over a wide range of economic transformations from the mercantile to the digital age, with special attention to the ambiguous and tension-filled meanings of property for women, African Americans, and Native Americans. Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 3), 374D (Topic: Property in American Culture), American Studies 370 (Topic: Property in American Culture), 370 (Topic 38).

**Topic 4: Gender and Slavery in the United States.** Same as History 350R (Topic 14: Gender and Slavery in the United States) and Women's and Gender Studies 345 (Topic 31: Gender and Slavery in the United States). Examines the gendered experience of chattel slavery in the United States. Includes critical analysis of classic and contemporary texts, films, and songs that focus on slave labor, family, community, sexuality, and the economy. Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 4), 374D (Topic: Gender and Slavery in the United States), History 350L (Topic: Gender and Slavery in the United States), 350R (Topic 14), Women's and Gender Studies 340 (Topic: Gender and Slavery in the United States), 345 (Topic 31). Partially fulfills legislative requirement for American history. Additional prerequisite: Six semester hours of coursework in history.

#### **AFR 372D. Topics in Black Education, Psychology, and Mental Health.**

Explores the history, theoretical developments, and institutional forms that impact the education and the mental and emotional health and well-being of people of African descent. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372D, 374, 374C, 374D, 374E, 374F. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic.

**Topic 1: Psychology of Race and Racism.** Same as Educational Psychology 362 (Topic 6: Psychology of Race and Racism). Only one of the following may be counted: African and African Diaspora Studies 374D (Topic 8: Psychology of Race and Racism), 372D (Topic 1), Curriculum and Instruction 362 (Topic 6).

#### **AFR 372E. Topics in Black Popular Culture.**

Studies in music, art, literature, and sports that explore the artistic, aesthetic, bodily, and other cultural expressions and traditions of black people. Three lecture hours a week for one semester; additional hours required for some topics. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372E, 374, 374C, 374D, 374E, 374F. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic.

**Topic 1: Toni Morrison.** Same as English 349S (Topic 5: Toni Morrison) and Women's and Gender Studies 345 (Topic 46: Toni Morrison). An examination of select novels by the Nobel Laureate and Pulitzer Prize-winning novelist focuses on the positional uniqueness that womanism shares with a predominant feminism, which surfaces in historicized familial relationships. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 1), 374F (Topic: Toni Morrison), English 349S (Topic 5), Women's and Gender Studies 340 (Topic: Toni Morrison), 345 (Topic 46). Prerequisite: Six semester hours of upper-division coursework in English.

**Topic 2: Slavery across Genres.** Same as American Studies 370 (Topic 32: Slavery across Genres). Uses nonfictional and fictional narrative accounts of slavery in the United States to examine the political, social, cultural, economic, and psychological aspects of the institution of slavery at different historical moments. Sources may include authors such as Frederick Douglass, Toni Morrison, William Faulkner, Harriet Beecher Stowe, and Edward P. Jones; graphic novels; conceptual art; court records; and bills of sale. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 2), 374D (Topic 7), American Studies 370 (Topic: Slavery across Genres), 370 (Topic 32).

**Topic 3: History of the Hip-Hop Generation.** Same as History 373C. Explores the evolution of the hip-hop generation through the lens of music, culture, and politics of black America after the civil rights movement. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 3), 374F (Topic 5: History of the Hip-Hop Generation), History 365G (Topic: History of the Hip-Hop Generation), 373C. Partially fulfills legislative requirement for American history.

**Topic 4: African American Literature through the Harlem Renaissance.** Same as English 376R. A survey of African American writing, including autobiography, poetry, fiction, and drama. Authors may include Douglass, Jacobs, Frances E. W. Harper, Chestnutt, Du Bois, Hurston, and Hughes. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 4), 374 (Topic 2: African American Literature through the Harlem Renaissance), 374F (Topic 1: African American Literature through the Harlem Renaissance), English 376R. Prerequisite: Nine semester hours of coursework in English\_or rhetoric and writing.

**Topic 5: African American Literature since the Harlem Renaissance.** Same as English 376S. The development of African American poetry, drama, fiction, and nonfiction since the Harlem Renaissance. Authors may include Wright, Ellison, Baldwin, Malcolm X, Baraka, Morrison, Shange, and Charles Johnson. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 5), Studies 374 (Topic 3: African American Literature since the Harlem Renaissance), 374F (Topic 2: African American Literature since the Harlem Renaissance), English 376S. Prerequisite: Nine semester hours of coursework in English\_or rhetoric and writing.

### **AFR 372F. Topics in Blacks in Government, Law, and Policy.**

Explores the philosophical, legal, and institutional traditions affecting black people as individual members of a group and participants in broader societies. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 320, 372F, 374, 374C, 374D, 374E. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic.

**Topic 3: States and Peasants.** Same as Government 365N (Topic 5: States and Peasants). Prerequisite: Six semester hours of lower-division\_coursework\_in government.

### **AFR 372G. Topics in African and African Diasporic Cultures and Languages.**

Explores the cultural, historical, linguistic, artistic, philosophical, and other intellectual traditions emerging from within Africa and as developed, reinterpreted, or reimagined in diasporic contexts. Three lecture hours a week for one semester; additional hours required for

some topics. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372G, 374, 374C, 374D, 374E, 374F. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic.

**Topic 1: Literature of AIDS in Africa.** Same as English 360S (Topic 2: Literature of AIDS in Africa). Examines the emerging cultural representations of AIDS in sub-Saharan Africa through journalistic, social science, and historical accounts. Examines the difficulty of representing the various aspects of a public-health crisis. Only one of the following may be counted: African and African Diaspora Studies 372G (Topic 1), 374C (Topic: Literature of African AIDS), English 360S (Topic 2), 376L (Topic: Literature of African AIDS). Additional prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 2: Nigeria: A History of Nation-Building.** Same as History 350L (Topic 35: Nigeria: A History of Nation-Building). Only one of the following may be counted: African and African Diaspora Studies 372G (Topic 2), 374 (Topic 18: Nigeria: A History of Nation-Building), 374C (Topic 1: Nigeria: A History of Nation-Building), History 350L (Topic 35).

**Topic 3: Archaeology of African Thought.** Same as Anthropology 324L (Topic 24: Archaeology of African Thought). Archaeological, historical, and ethnographic data as they relate to the foundations of contemporary African and African American societies. Only one of the following may be counted: African and African Diaspora Studies 372G (Topic 3), 374 (Topic 22: Archaeology of African Thought), 374C (Topic 2: Archaeology of African Thought), Anthropology 324L (Topic 24).

**Topic 4: African Cinemas.** Explores the cultural and social values in historical, literary, and fictional contexts of African films.

### **AFR 373. Independent Research.**

Supervised individual research on a problem in African and African diaspora studies. Conference course. May be repeated for credit. Prerequisite: Upper-division standing, African and African Diaspora Studies 301, and written consent of the supervising faculty member. Consent forms are available in the center office.

### **AFR 374. Special Topics.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372C, 372D, 372E, 372F, 372G, 374. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: African American Family.** Same as Social Work 360K (Topic 2: African American Family) and Women's and Gender Studies 340 (Topic 3: African American Family).

**Topic 10: Black Perspectives in Jazz.** Same as Music 342 (Topic 5: Black Perspectives in Jazz). Prerequisite: Upper-division standing.

**Topic 11: African American Performance History.** Prerequisite: Upper-division standing and consent of instructor.

**Topic 16: Racial and Ethnic Relations.** Contemporary racial and ethnic problems; emphasis on minority groups in the United States.

**Topic 25: Autobiography: A Modern Literary Species.** Same as Comparative Literature 323 (Topic 3: Autobiography: A Modern Literary Species) and Middle Eastern Studies 342 (Topic 20: Autobiography: A Modern Literary Species). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 25), Comparative Literature 323 (Topic 3), English 379N (Topic 5: Autobiography: A Modern Literary Species), Middle



Eastern Studies 322K (Topic 25: Autobiography: A Modern Literary Species), 342 (Topic 20), Women's and Gender Studies 340 (Topic: Autobiography: A Modern Literary Species). Prerequisite: Upper-division standing.

**Topic 26: Self-Revelation in Women's Writing.** Same as Comparative Literature 323 (Topic 4: Self-Revelation in Women's Writing), Middle Eastern Studies 342 (Topic 19: Self-Revelation in Women's Writing), and Women's and Gender Studies 340 (Topic 14: Self-Revelation in Women's Writing). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 26), Comparative Literature 323 (Topic 4), English 376L (Topic 9: Self-Revelation in Women's Writing), Middle Eastern Studies 322K (Topic 26: Self-Revelation in Women's Writing), 342 (Topic 19), Persian 361 (Topic: Self-Revelation in Women's Writing). Prerequisite: Upper-division standing.

**Topic 27: Race and Sport in African American Life.** Same as Anthropology 324L (Topic 26: Race and Sport in African American Life) and Kinesiology 352K (Topic 6: Race and Sport in African American Life). Prerequisite: Upper-division standing.

### **AFR 374C. Advanced Topics in African Studies.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372C, 372D, 372E, 372F, 372G, 374C. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **AFR 374D. Advanced Topics in Black United States Studies.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372C, 372D, 372E, 372F, 372G, 372G, 374D. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

#### **Topic 2: History of Black Entrepreneurship in the United States.**

Same as History 350R (Topic 12: History of Black Entrepreneurship in the United States). African and African Diaspora Studies 374D (Topic 2) and History 350L (Topic 53: History of Black Entrepreneurship in the United States) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 3: Slavery in the United States.** Same as History 350R (Topic 10: Slavery in the United States). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 21: Slavery in the United States), 374D (Topic 3), History 350L (Topic 39: Slavery in the United States), 350R (Topic 10). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 4: African Americans and the Media.** Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 23: African Americans and the Media), 374D (Topic 4), Journalism 340C (Topic 2: African Americans and the Media). Prerequisite: Upper-division standing.

**Topic 5: Race, Sport, and Identity.** Same as Sociology 322R. Explores the sociological significance of sport in relation to the construction of racialized identities. Focuses primarily but not exclusively on the black experience in sport, and examines the changing meanings given to sport throughout the twentieth century. Only one of the following may be counted: African and African

Diaspora Studies 374 (Topic: Race, Sport, and Identity), 374D (Topic 5), Sociology 321K (Topic 8: Race, Sport, and Identity), 322R. Prerequisite: Upper-division standing and Sociology 302.

**Topic 6: Black Americans and the South.** Same as American Studies 370 (Topic 31: Black Americans and the South). Traces the post-Reconstruction conversation among black Americans over how to live in the South and make sense of its history of widespread racial violence, lynching, de jure segregation, civil rights struggles, and their legacies. Sources include authors such as Jean Toomer, Tayari Jones, and Natasha Trethewey, and fiction, speeches, newspaper accounts, photographs, paintings, poetry, and popular music, including jazz, blues, rock, rhythm and blues, and hip hop and rap. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Black Americans and the South), 374D (Topic 6), American Studies 370 (Topic 31). Prerequisite: Upper-division standing.

**Topic 9: Black Women in America.** Same as History 350R (Topic 17: Black Women in America) and Women's and Gender Studies 340 (Topic 9: Black Women in America). Uses primary sources, historical monographs, and essays to provide a chronological and thematic overview of the experiences of black women in America from their African roots to the circumstances they face in the present era. Only one of the following may be counted: African and African Diaspora Studies 374D (Topic 9) History 350L (Topic: Black Women in America), 350R (Topic 17), Women's and Gender Studies 340 (Topic 9). Partially fulfills legislative requirement for American History. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 10: Racism and Anti-Racism.** Same as Asian American Studies 330 (Topic 2: Racism and Anti-Racism). Course examines the few theories/definitions of racism across several fields: anthropology, sociology, psychology, cultural studies, postcolonial studies, gender/sexuality studies. The second half of the course, focuses on anti-racist activism, particularly within people of color and immigrant communities. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **AFR 374E. Advanced Topics in the African Diaspora.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Some topics partially fulfill legislative requirement for American history. Only one of the following may be counted unless the topics vary: African and African Diaspora Studies 372C, 372D, 372E, 372F, 372G, 374E. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: The Politics of Race and Violence in Brazil.** Same as Anthropology 324L (Topic 37: The Politics of Race and Violence in Brazil) and Latin American Studies 324L (Topic 14: The Politics of Race and Violence in Brazil). Prerequisite: Upper-division standing.

**Topic 3: Atlantic Slavery: History and Memory.** Same as American Studies 370 (Topic 33: Atlantic Slavery: History and Memory). Charts a history of Atlantic slavery by focusing on primary sources detailing crucial events and contexts such as the Zong Massacre, the Haitian Revolution, and Dred Scott vs. Sandford, among others. Considers how historians, memoirists, fiction writers, visual and performance artists and filmmakers have come to terms with that history and its implications. Only one of the following may be counted: African and African Diaspora Studies 374E (Topic 3), American Studies 370 (Topic: Atlantic Slavery: History and Memory), 370 (Topic 33). Prerequisite: Upper-division standing.

### **AFR 374F. Advanced Topics in Black Expressive Culture.**

Three lecture hours a week for one semester, with one laboratory hour a week if required by the topic. Only one of the following may be



counted unless the topics vary: African and African Diaspora Studies 372C, 372D, 372E, 372G, 374F. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 3: Colonial and African-British Literature.** Only one of the following may be counted: English 376L (Topic 4: Colonial and African-British Literature), African and African Diaspora Studies 374 (Topic 12: Colonial and African-British Literature), 374F (Topic 3). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 4: Contemporary Women Authors.** Same as English 370W (Topic 2: Contemporary Women Authors) and Women's and Gender Studies 345 (Topic 15: Contemporary Women Authors). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 6: Writing Slavery.** Same as English 376M (Topic 3: Writing Slavery). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 7: Caribbean Literature.** Same as Comparative Literature 323 (Topic 6: Caribbean Literature) and English 360L (Topic 2: Caribbean Literature). Only one of the following may be counted: African and African Diaspora Studies 374F (Topic 4), Comparative Literature 323 (Topic 6), English 379N (Topic: Caribbean Literature), 360L (Topic 2). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **AFR 375. Community Internship.**

Internship in a community organization that facilitates the economic, political, and social development of Austin's African American community. Students participate in research projects under the supervision of a faculty member. Approximately eight hours of fieldwork a week for one semester. Additional lecture hours may be required. Prerequisite: Upper-division standing, African and African Diaspora Studies 301, and consent of instructor.

### **AFR 376. Senior Seminar.**

Restricted to majors in African and African diaspora studies. A capstone course focusing on black intellectual traditions. Three lecture hours a week for one semester. Prerequisite: Completion of seventy-five semester hours of college coursework, African and African Diaspora Studies 301, and consent of instructor.

### **AFR 679H. Honors Tutorial Course.**

For honors candidates in African and African diaspora studies. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Conference course for two semesters. Prerequisite: For 679HA, admission to the African and African Diaspora Studies Honors Program no later than two semesters before expected graduation; for 679HB, African and African Diaspora Studies 679HA. A University grade point average of at least 3.00 and a grade point average in African and African diaspora studies of at least 3.50 are required for admission to the African and African Diaspora Studies Honors Program.

## **Swahili: SWA**

### **Lower-Division Courses**

#### **SWA 601C. Intensive Swahili I.**

Six lecture hours a week for one semester. Swahili 601C and 506 may not both be counted. Swahili 601C and 507 may not both be counted.

#### **SWA 506. First-Year Swahili I.**

Five lecture hours a week for one semester. Swahili 601C and 506 may not both be counted.

#### **SWA 507. First-Year Swahili II.**

Five lecture hours a week for one semester. Swahili 601C and 507 may not both be counted. Prerequisite: Swahili 506.

#### **SWA 611C. Intensive Swahili II.**

Six lecture hours a week for one semester. Swahili 611C and 312K may not both be counted. Swahili 611C and 312L may not both be counted. Prerequisite: Swahili 601C.

#### **SWA 612. Accelerated Second-Year Swahili.**

Not open to native speakers of Swahili. Eight lecture hours a week for one semester.

#### **SWA 312K. Second-Year Swahili I.**

Three lecture hours a week for one semester. Swahili 611C and 312K may not both be counted. Prerequisite: Swahili 507.

#### **SWA 312L. Second-Year Swahili II.**

Three lecture hours a week for one semester. Swahili 611C and 312L may not both be counted. Prerequisite: Swahili 312K.

## **Upper-Division Courses**

### **SWA 360. Conference Course in Swahili Language and Literature.**

Supervised individual study of selected problems in Swahili language or literature. Conference course. May be repeated for credit. Prerequisite: Consent of instructor.

## **Yoruba: YOR**

### **Lower-Division Courses**

#### **YOR 506. First-Year Yoruba I.**

Not open to native speakers of Yoruba. Standard Yoruba of southwest Nigeria. Five lecture hours a week for one semester.

#### **YOR 507. First-Year Yoruba II.**

Not open to native speakers of Yoruba. Five lecture hours a week for one semester. Prerequisite: Yoruba 506 or the equivalent.

#### **YOR 312K. Second-Year Yoruba I.**

Oral expression, reading, and comprehension. Three lecture hours a week for one semester. Prerequisite: Yoruba 507 with a grade of at least C.

#### **YOR 312L. Second-Year Yoruba II.**

Oral expression, reading, and comprehension. Three lecture hours a week for one semester. Prerequisite: Yoruba 312K with a grade of at least C.

# Department of American Studies

## American Studies: AMS

### Lower-Division Courses

#### AMS 310. Introduction to American Studies.

Same as History 315G. An interdisciplinary introduction to the historical exploration of American culture. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 310, History 306N (Topic 2: Introduction to American Studies), 315G. Partially fulfills legislative requirement for American history.

#### AMS 311S. Introductory Seminar in American Studies.

Writing, reading, and discussion on an American studies topic, with emphasis on the evaluation of information, analytical reading, and critical writing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Consumer Culture in America.** Examines consumer culture in the United States through historical and theoretical texts, including film, books, and scholarly works.

**Topic 2: American Sports and Culture.** Examines how the games Americans play reflect beliefs about success, class hierarchies, gender roles, race relations, and global ambitions.

**Topic 3: United States Culture and Globalization.** Introduction to the concepts and processes of globalization and how globalization has shaped and been shaped by culture in the United States at different periods in history.

#### AMS 315. Topics in American Life.

Interdisciplinary exploration of American cultural and intellectual life. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### AMS 315C. Movies Go To War, from World War I to Vietnam.

Same as Germanic Civilization 311 (Topic 2: Movies Go To War, World War I to Vietnam). Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 315 (Topic: Movies Go to War, World War I to Vietnam), 315C, Germanic Civilization 311 (Topic 2), Science, Technology, and Society 311 (Topic: Movies Go to War, World War I to Vietnam).

#### AMS 315D. Anthropology of Race and Ethnicity: An Introduction.

Same as Anthropology 310L (Topic 2: Anthropology of Race and Ethnicity: An Introduction) and African and African Diaspora Studies 317D (Topic 2: Anthropology of Race and Ethnicity: An Introduction). Examines the social importance of race and ethnicity both in America and around the world. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 317D (Topic 2) and American Studies 315 (Topic: Anthropology of Race and Ethnicity), 315D, Anthropology 310L (Topic 2).

#### AMS 315E. Introduction to Historical Archaeology.

Same as Anthropology 310L (Topic 4: Introduction to Historical Archaeology). A comprehensive survey of the methods, theories, and discoveries of historical archaeology, an interdisciplinary field that draws its theoretical and methodological foundations from

anthropology, archaeology, and history. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: American Studies 315 (Topic: Introduction to Historical Archaeology), 315E, Anthropology 310L (Topic 4).

#### AMS 315F. Native American Literature and Culture.

Same as English 314V (Topic 5: Native American Literature and Culture). Studies Native American literature from different regions and cultures and considers this literary tradition in tribal national and United States national contexts. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 315 (Topic: Native American Literature and Culture), 315F, English 314V (Topic 5). Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

#### AMS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in American Studies.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### AMS 321. Studies in American Societies.

A study of America through its geography, language, government, or cultures. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic.

##### Topic 1: Native American Cultures of the Greater Southwest.

Same as Anthropology 322M (Topic 3: Native American Cultures of the Greater Southwest).

**Topic 2: Language and Speech in American Society.** Same as Anthropology 325N, Linguistics 373 (Topic 2: Language and Speech in American Society), and Sociology 352M (Topic 3: Language and Speech in American Society). Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.

**Topic 3: Native American Cultures North of Mexico.** Same as Anthropology 336L.

**Topic 4: America and the Holocaust.** Same as History 356R and Jewish Studies 365 (Topic 1: America and the Holocaust). Only one of the following may be counted: American Studies 321 (Topic 4), 370 (Topic: America and the Holocaust), History 350L (Topic: America and the Holocaust), 356R, 365G (Topic: America and the Holocaust), Jewish Studies 361 (Topic: America and the Holocaust), 365 (Topic 1), Liberal Arts Honors 350 (Topic: America and the Holocaust). Partially fulfills legislative requirement for American history.

**Topic 5: Asian American Jurisprudence.** Same as Asian American Studies 325 (Topic 5: Asian American Jurisprudence) and Government 357M (Topic 9: Asian American Jurisprudence). Introduction to the study of Asian Americans and the law. Examines the historical development of United States law and its relationship to Asian Americans, and of Asian American jurisprudence as an independent field of legal scholarship. Three lecture hours a week for one semester. Additional prerequisite: Upper-division standing.

**AMS 321E. African American History to 1860.**

Same as African and African Diaspora Studies 357C and History 357C. Review of West African origins; New World settlement patterns, social life, and culture; discussion of the Atlantic slave trade, the development of capitalism and plantation slavery, and the origins of racism. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 357C, American Studies 321 (Topic: African American History to 1860), 321E, History 357C. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**AMS 321F. African American History since 1860.**

Same as African and African Diaspora Studies 357D, History 357D, and Urban Studies 353 (Topic 1: African American History since 1860). Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 357D, American Studies 321 (Topic: African American History since 1860), 321F, History 357D, Urban Studies 353 (Topic 1). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**AMS 321G. Native Americans in Texas.**

Same as Anthropology 326C. Studies the history of Native Americans in Texas using concepts and evidence from anthropology, history, archaeology, historical geography, and Native American studies. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic: Native Americans in Texas), 321G, Anthropology 324L (Topic: Native American in Texas). Prerequisite: Upper-division standing.

**AMS 322. Studies in American Writing.**

A study of America through its literature, popular fiction, journalism, and folklore. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites vary with the topic.

**Topic 3: Sport, Fitness, and Mass Media.** Same as Kinesiology 352K (Topic 5: Sport, Fitness, and Mass Media).

**AMS 325. Studies in American Art and Media Culture.**

Study of American culture and society through media and the arts. Three lecture hours or two lecture hours and one discussion hour a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: American Painting to 1860.** Same as Art History 374 (Topic 1: American Painting to 1860).

**Topic 3: American Painting, 1860-1913.** Same as Art History 374 (Topic 2: American Painting, 1860-1913).

**AMS 327. Studies in Religion and Philosophy.**

Interdisciplinary exploration of religion and philosophy in American culture. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic.

**AMS 328. American Culture and Social Life since 1945.**

Same as History 356N. Study of postwar American culture and society, using novels, plays, movies, music, television, journalism, political thought, and social criticism; special attention to the 1950s. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**AMS 329. Environmental History of North America.**

Same as History 350R (Topic 7: Environmental History of North America) and Urban Studies 353 (Topic 5: Environmental History of North America). The history of humanity's influence on the plants, animals, microlife, soils, water, and air of North America, and vice versa, from the arrival of the proto-Indians to the contemporary environmental crisis. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 329, History 350L (Topic 4: Environmental History of North America), 350R (Topic 7), Urban Studies 353 (Topic 5). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**AMS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in American Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**AMS 330. Modernism in American Design and Architecture.**

Same as Art History 367 (Topic 3: Modernism in American Design and Architecture) and Urban Studies 352 (Topic 5: Modernism in American Design and Architecture). A historical survey of artifacts, buildings, and urban environments, focusing on responses to machine-age civilization. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**AMS 355. Main Currents of American Culture to 1865.**

Same as History 355N. Traces the development of American culture and society from the colonial era until the end of the Civil War. Major themes include racial conflict, religion, slavery, the development of democracy, and cultural reform. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**AMS 356. Main Currents of American Culture since 1865.**

Same as History 356K. Traces the development of American culture and society from the end of the Civil War to the present. Major themes include racial conflict, pluralism, religion, urban development and reform, modernism, government centralization, cultural radicalism, and the rebirth of conservatism. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**AMS 358. The United States, 1920-1941.**

Same as History 355M. A history of political, economic, diplomatic, military, social, and cultural developments in the United States between the two world wars. Three lecture hours a week for one

semester. Partially fulfills legislative requirement for American history.  
Prerequisite: Upper-division standing.

### **AMS 370. Seminar in American Culture.**

Interdisciplinary seminar on themes in American life. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic.

**Topic 1: American Cultural History of Alcohol and Drugs.** Same as History 350R (Topic 5: American Cultural History of Alcohol and Drugs). Study of the American use and perception of drugs, including alcohol, and how they have changed over time. Examines significant shifts in American attitudes toward individualism and social control. Only one of the following may be counted: American Studies 370 (Topic 1), History 350L (Topic 2: American Cultural History of Alcohol and Drugs), 350R (Topic 5). Partially fulfills legislative requirement for American history. Additional prerequisite: Six semester hours of coursework in history.

**Topic 6: Gender-Based Discrimination.** Same as Government 357M (Topic 1: Gender-Based Discrimination) and Women's and Gender Studies 345 (Topic 8: Gender-Based Discrimination). Studies the substance of laws that relate to gender-based roles, and the participation of women in the legal process. Additional prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

**Topic 10: Leadership in America.** Same as Government 370L (Topic 2: Leadership in America) and Women's and Gender Studies 345 (Topic 34: Leadership in America). Introduction to the concepts of leadership and the application of those concepts in public and political leadership. Additional prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

**Topic 13: The Culture of Cities.** Same as Geography 356T (Topic 1: The Culture of Cities) and Urban Studies 354 (Topic 4: The Culture of Cities). Examines the social, geographical, and cultural evolution of the United States from a rural and small-town society to an urban and suburban nation. Subjects may include the segregation of public and private space; the formation of urban subcultures organized by gender, work, race, religion, and sexuality; social and spatial divisions between rich and poor and native-born and immigrant; and the increasing importance of "cultural capital" in reshaping urban politics and in conflicts over revitalization and gentrification.

**Topic 17: Postmodern America.** Postmodernity considered as a means of understanding major cultural transformations since 1945 in areas such as architecture, art, criticism, film, journalism, literature, music, philosophy, photography, and political thought.

**Topic 18: The Beats and American Culture, 1945 to 1990.** Examines writers such as Kerouac, Ginsberg, and Burroughs during the immediate post-World War II era. Considers their historical origins, their representations of society and culture, and their influence from the 1960s through the 1980s on writers and artists in a variety of fields.

**Topic 19: The Cold War and American Childhood.** Uses childhood as a focus for studying the cultural and political climate of the post-World War II era.

**Topic 20: Children's Literature and American Culture.** Examines changes in American childhood using children's literature that covers several different time periods.

**Topic 21: Society, Culture, and Politics in the 1960s.** Various social and cultural movements of the 1960s, including civil rights, the New Left, black power and other ethnic nationalisms, the peace movement, the black arts movement, guerrilla theater, psychedelic arts and the counterculture, women's liberation, gay liberation, the environmental movement, and the conservative movement.

**Topic 22: Deviance in America: An Alternative History.** Same as History 350R (Topic 6: Deviance in America: An Alternative History). Examines movements and individuals outside the conventional mainstream and how they reflect American ideals and dilemmas. Only one of the following may be counted: American Studies 370 (Topic 22), History 350L (Topic 61: Deviance in America: An Alternative History), 350R (Topic 6). Partially fulfills legislative requirement for American history. Additional prerequisite: Six semester hours of coursework in history.

**Topic 23: Memory and Place.** Same as Geography 356T (Topic 2: Memory and Place). Explores how cultural memory is produced in its various forms, from memorials, public art, and commodities to popular culture, rituals, and museums, and how public remembering is inevitably anchored in specific geographic places.

**Topic 24: Comparative Cultures of Beauty.** Same as Asian American Studies 320 (Topic 2: Comparative Cultures of Beauty) and Women's and Gender Studies 345 (Topic 45: Comparative Cultures of Beauty). Examines fashion and beauty as discourses and cultural practices affecting identity, body politics, race, gender, sexuality, and class.

**Topic 25: Immigrants, Amusements, and Consumer Culture.** Same as Asian American Studies 320 (Topic 1: Immigrants, Amusements, and Consumer Culture). Studies the growth of consumer capitalism as it coincides with the migration and integration of immigrants into American society. Examines the emergence of consumer culture as a force that defines modern American society and traces its developments and current manifestations throughout the world.

**Topic 26: American Food.** Same as Women's and Gender Studies 345 (Topic 41: American Food). Studies diverse American food cultures from a humanities perspective, exploring connections between global, national, and local communities. Uses scholarship in the field of food studies as well as cookbooks, novels, poetry, photographs, songs, documentaries, and oral histories to investigate the past and present of American food communities.

**Topic 27: Nature and Gender in America.** Same as Women's and Gender Studies 345 (Topic 42: Nature and Gender in America). Study of the connections between nature and gender in American national narratives. Explores how Americans of differing classes, races, genders, sexual orientations, and ages have shaped and experienced changing ideas of America, wilderness, domestication, and society over time and in different regions of the country.

**Topic 28: Animals and American Culture.** Same as History 350R (Topic 9: Animals and American Culture) and Women's and Gender Studies 345 (Topic 43: Animals and American Culture). Explores the role of animals in American history, culture, and society. Only one of the following may be counted: American Studies 370 (Topic 28), History 350L (Topic 60: Animals and American Culture), 350R (Topic 9), Women's and Gender Studies 345 (Topic 43). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 29: Women Radicals and Reformers.** Same as Women's and Gender Studies 345 (Topic 44: Women Radicals and Reformers). Traces traditions of women's radical activism and reform beginning with the Enlightenment and the American Revolution and continuing to the present, with concentration on the twentieth century.



**Topic 30: Women in Postwar America.** Same as History 350R (Topic 8: Women in Postwar America) and Women's and Gender Studies 345 (Topic 37: Women in Postwar America). Only one of the following may be counted: American Studies 370 (Topic 30), History 350L (Topic 58: Women in Postwar America), 350R (Topic 8), Women's and Gender Studies 345 (Topic 37). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 31: Black Americans and the South.** Same as African and African Diaspora Studies 374D (Topic 6: Black Americans and the South). Traces the post-Reconstruction conversation among black Americans over how to live in the South and make sense of its history of widespread racial violence, lynching, de jure segregation, civil rights struggles, and their legacies. Sources include authors such as Jean Toomer, Tayari Jones, and Natasha Trethewey, and fiction, speeches, newspaper accounts, photographs, paintings, poetry, and popular music, including jazz, blues, rock, rhythm and blues, and hip hop and rap. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Black Americans and the South), 374D (Topic 6), American Studies 370 (Topic 31).

**Topic 32: Slavery across Genres.** Same as African and African Diaspora Studies 372E (Topic 2: Slavery across Genres). Uses nonfictional and fictional narrative accounts of slavery in the United States to examine the political, social, cultural, economic, and psychological aspects of the institution of slavery at different historical moments. Sources may include authors such as Frederick Douglass, Toni Morrison, William Faulkner, Harriet Beecher Stowe, and Edward P. Jones; graphic novels; conceptual art; court records; and bills of sale. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 2), 374D (Topic 7), American Studies 370 (Topic: Slavery across Genres), 370 (Topic 32).

**Topic 33: Atlantic Slavery: History and Memory.** Same as African and African Diaspora Studies 374E (Topic 3: Atlantic Slavery: History and Memory). Charts a history of Atlantic slavery by focusing on primary sources detailing crucial events and contexts such as the Zong Massacre, the Haitian Revolution, and Dred Scott vs. Sandford, among others. Considers how historians, memoirists, fiction writers, visual and performance artists and filmmakers have come to terms with that history and its implications. Only one of the following may be counted: African and African Diaspora Studies 374E (Topic 3), American Studies 370 (Topic: Atlantic Slavery: History and Memory), 370 (Topic 33).

**Topic 34: American Disasters.** Examines natural and human-made disasters as key turning points in American history. Engages with the politics of disasters, analyzing environmental contexts, grassroots activism, legislative policies, and approaches toward commemoration.

**Topic 35: American Popular Culture, 1682-Present.** Same as History 350R (Topic 19: American Popular Culture, 1682-Present) and Women's and Gender Studies 340 (Topic 26: American Popular Culture, 1682-Present). Explores the evolution of American popular culture and its relationship to national consolidation, and at times, disunion, over the last 330 years. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 36: Exiles, Expatriates, and Political Pilgrims.** Explores the ways in which foreign experiences formed and re-formed individuals' perspectives on the United States, the nature of their social critiques of the U.S., and Americans' experiences of other nations.

**Topic 37: The Politics of Creativity.** Interdisciplinary investigation of artists in American society and of the intersection of art and politics.

**Topic 38: Property in American Culture.** African and African Diaspora Studies 372C (Topic 3: Property in American Culture). Explores American conceptions of property over a wide range of economic transformations from the mercantile to the digital age, with special attention to the ambiguous and tension-filled meanings of property for women, African Americans, and Native Americans. Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 3), 374D (Topic: Property in American Culture), American Studies 370 (Topic: Property in American Culture), 370 (Topic 38).

**Topic 39: Radical Latinos.** Mexican American Studies 374 (Topic 32: Radical Latinos). Examines the social positioning and history of Latinas/os in the United States. Analyzes the histories of Latinas/os who have gone against mainstream expectations, or who have challenged or critiqued the status quo in provocative and unexpected ways. Only one of the following may be counted: American Studies 370 (Topic Radical Latinos), 370 (Topic 39), Mexican American Studies 374 (Topic: Radical Latinos), 374 (Topic 32).

**Topic 40: Southern Cultures.** Women's and Gender Studies 345 (Topic 27: Southern Cultures). Investigation of multiple, fluid, and diverse southern cultures through topics such as NASCAR, biscuits and cornbread, mega-churches, beauty pageants, jazz, country music, southern hip hop, migrant farm cultures, matzo ball soup with collards, the Trail of Tears, Gullah, Tara, Graceland, and more. Includes discussion of stereotypes and the individual truths about women, men, and southern in the context of this discussion.

**Topic 41: Vienna: Memory and the City.** European Studies 346 (Topic 5: Vienna: Memory and the City), History 362G (Topic 2: Vienna: Memory and the City), and Urban Studies 354 (Topic 7: Vienna: Memory and the City). Examines the ways in which cultural memory has shaped, and continues to shape, urban life in Vienna, Austria. Only one of the following may be counted: American Studies 315 (Topic: Vienna: Memory and the City), 370 (Topic 41), European Studies 301 (Topic: Vienna: Memory and the City), 306 (Topic: Vienna: Memory and the City), 346 (Topic 5), Geography 309 (Topic: Vienna: Memory and the City), Germanic Civilization 311 (Topic: Vienna: Memory and the City), History 306N (Topic: Vienna: Memory and the City), 362G (Topic 2), Urban Studies 305 (Topic: Vienna: Memory and the City), 354 (Topic 7). Prerequisite: Upper-division standing.

### **AMS 372. Conference Course.**

Supervised individual study of selected subjects in American studies. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **AMS 679H. Honors Tutorial Course.**

Individual readings and conferences in connection with an original research paper. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the American Studies Honors Program; for 679HB, American Studies 679HA.

## **Department of Anthropology**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University

courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Anthropology: ANT**

### **Lower-Division Courses**

#### **ANT 301 (TCCN: ANTH 2301). Physical Anthropology.**

Human evolution, race, heredity, the organic basis of culture; culture history through the Paleolithic stage. The equivalent of three lecture hours a week for one semester.

#### **ANT 302 (TCCN: ANTH 2351). Cultural Anthropology.**

The concept of culture; social and political organization; language; the supernatural; elementary cultural theory. Three lecture hours a week or two lecture hours and one discussion hour a week for one semester.

#### **ANT 304 (TCCN: ANTH 2302). Introduction to Archaeological Studies: Prehistoric Archaeology.**

Anthropological study of prehistory, from human beginnings to the appearance of written records. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Anthropology 304 and Archaeology 301 may not both be counted.

#### **ANT 305. Expressive Culture.**

How cultural assumptions affect how we tell and respond to different kinds of stories, including fairy tales, movies, and televised news. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

#### **ANT 307. Culture and Communication.**

An introduction to the study of culture through communication and the theory of signs. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

#### **ANT 310L. Introductory Topics in Anthropology.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary.

##### **Topic 2: Anthropology of Race and Ethnicity: An Introduction.**

Same as American Studies 315D and African and African Diaspora Studies 317D (Topic 2: Anthropology of Race and Ethnicity: An Introduction). Examines the social importance of race and ethnicity both in America and around the world. Only one of the following may be counted: African and African Diaspora Studies 317D (Topic 2) and American Studies 315 (Topic: Anthropology of Race and Ethnicity), 315D, Anthropology 310L (Topic 2).

**Topic 3: Anthropology of Latin America.** Same as Latin American Studies 310 (Topic 4: Anthropology of Latin America). Provides a framework for understanding contemporary concerns in Latin America.

**Topic 4: Introduction to Historical Archaeology.** Same as American Studies 315E. A comprehensive survey of the methods, theories, and discoveries of historical archaeology, an interdisciplinary field that draws its theoretical and methodological foundations from anthropology, archaeology, and history. Only one of the following may be counted: American Studies 315 (Topic: Introduction to Historical Archaeology), 315E, Anthropology 310L (Topic 4).

**Topic 5: Introduction to India.** Same as Asian Studies 302K. Introduction to Indian civilization, past and present, including religion, literature, arts, philosophy, and history. Only one of the

following may be counted: Anthropology 310L (Topic 5), Asian Studies 302K, History 306N (Topic: Introduction to India).

#### **ANT 314C. Introduction to Mesoamerican Archaeology.**

Same as Latin American Studies 310 (Topic 3: Introduction to Mesoamerican Archaeology). Introduction to ancient Mesoamerica from the time of emerging social inequality in the formative period until the Spanish conquest of Mexico-Tenochtitlan in the sixteenth century. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Anthropology 310L (Topic 1: Introduction to Mesoamerican Archaeology), 314C, Latin American Studies 310 (Topic 3).

#### **ANT 318L. Mexican American Culture.**

Same as Mexican American Studies 318. Mexican American cultural distinctiveness in the areas of social organization, child rearing, food culture, folklore, language, and religion. Three lecture hours a week for one semester.

#### **ANT 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Anthropology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Anthropology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **ANT 320L. Topics in Language, Culture, and Communication.**

Relationship of language to culture and society, and of folk classifications to principles of social organization and cognition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Ethnography of Communication.** History and overview of the ethnography of communication with a focus on theoretical and methodological issues. Prerequisite: Anthropology 302.

**Topic 4: American Indian Languages and Cultures.** Prerequisite: Anthropology 302.

**Topic 5: Speech Play and Verbal Art.** Prerequisite: Anthropology 302.

**Topic 8: German and English: Historical Perspectives.** Same as Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives), and Linguistics 373 (Topic 8: German and English: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8), 320L (Topic 9: The German Language: Historical Perspectives), Classical Civilization 348 (Topic 8), 348 (Topic 9: The German Language: Historical Perspectives), German 369 (Topic 4: The German Language: Historical Perspectives), Germanic Civilization 327E (Topic 9), Linguistics 373 (Topic 8), 373 (Topic 9: The German Language: Historical Perspectives). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

**Topic 9: The German Language: Historical Perspectives.** Same as Classical Civilization 348 (Topic 9: The German Language:

Historical Perspectives), German 369 (Topic 4: The German Language: Historical Perspectives), and Linguistics 373 (Topic 9: The German Language: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8: German and English: Historical Perspectives), 320L (Topic 9), Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), 348 (Topic 9), German 369 (Topic 4), Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives), Linguistics 373 (Topic 8: German and English: Historical Perspectives), 373 (Topic 9). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.

**Topic 10: Language, Culture, and Society in Latin America.** Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.

### **ANT 322K. Southwestern Archaeology.**

Prehistory of New Mexico, Arizona, Utah, and neighboring areas, from the earliest human occupation to the Spanish conquest. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **ANT 322M. Topics in Cultures of the World.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Perspectives on Japanese Culture.** Same as Asian Studies 372 (Topic 12: Perspectives on Japanese Culture). Prerequisite: Upper-division standing.

**Topic 3: Native American Cultures of the Greater Southwest.** Same as American Studies 321 (Topic 1: Native American Cultures of the Greater Southwest). Prerequisite: Upper-division standing.

**Topic 5: Indians of Mexico and Guatemala.** Same as Latin American Studies 324L (Topic 2: Indians of Mexico and Guatemala). Prerequisite: Upper-division standing.

**Topic 10: Mexican American Indigenous Heritage.** Same as Mexican American Studies 374 (Topic 23: Mexican American Indigenous Heritage). The prehistory, history, and contemporary racial understanding of Mexican Americans. Prerequisite: Upper-division standing.

### **ANT 324L. Topics in Anthropology.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Primitive Technology.** Prerequisite: Upper-division standing.

**Topic 7: Introduction to African Prehistory.** Same as African and African Diaspora Studies 322. Prerequisite: Upper-division standing.

**Topic 8: Cultures of Southeast Asia.** Same as Asian Studies 361 (Topic 5: Cultures of Southeast Asia). Comparative study of the peoples of Indonesia, Burma, Thailand, Malaysia, and other countries. Prerequisite: Upper-division standing.

**Topic 9: The African Diaspora in the Americas.** Same as African and African Diaspora Studies 321. Black cultures and societies in the New World, and their African heritage. Prerequisite: Upper-division standing.

**Topic 10: Colonialism and Nationalism.** Same as Asian Studies 361 (Topic 10: Colonialism and Nationalism). Prerequisite: Upper-division standing.

**Topic 13: Musics of India.** Same as Asian Studies 361 (Topic 11: Musics of India) and Music 342 (Topic 3: Musics of India). Prerequisite: Upper-division standing.

**Topic 16: Contemporary India.** Same as Asian Studies 361 (Topic 3: Contemporary India).

**Topic 17: Cultural Ecology.** Same as Geography 331K. Long-term patterns and processes of conversion of planet Earth to the human home, including the emergence of humans, the achievement of control over the food supply, the emergence of civilizations, and globalization. Prerequisite: Upper-division standing.

**Topic 18: The Male in African American Culture and Society.** Same as African and African Diaspora Studies 323. Prerequisite: Upper-division standing.

**Topic 23: History of Hindu Religious Traditions.** Same as Asian Studies 340 (Topic 4: History of Hindu Religious Traditions), History 364G (Topic 1: History of Hindu Religious Traditions), and Religious Studies 321. History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. Prerequisite: Upper-division standing.

**Topic 24: Archaeology of African Thought.** Same as African and African Diaspora Studies 372G (Topic 3: Archaeology of African Thought). Archaeological, historical, and ethnographic data as they relate to the foundations of contemporary African and African American societies. Only one of the following may be counted: African and African Diaspora 372G (Topic 3), 374 (Topic 22: Archaeology of African Thought), 374C (Topic 2: Archaeology of African Thought), Anthropology 324L (Topic 24). Prerequisite: Upper-division standing.

**Topic 26: Race and Sport in African American Life.** Same as African and African Diaspora Studies 374 (Topic 27: Race and Sport in African American Life) and Kinesiology 352K (Topic 6: Race and Sport in African American Life). Prerequisite: Upper-division standing.

**Topic 29: Sacred and Ceremonial Textiles.** Same as Islamic Studies 372 (Topic 11: Sacred and Ceremonial Textiles). Textiles and material objects indigenous to the Islamic world, and what they reveal about the culture of various Islamic societies. Only one of the following may be counted: Anthropology 324L (Topic 29), Islamic Studies 372 (Topic 11), Middle Eastern Studies 322K (Topic 24: Sacred and Ceremonial Textiles). Prerequisite: Upper-division standing.

**Topic 33: Geographical Information Systems and Remote Sensing for Archaeology and Paleontology.** Same as Geography 356T (Topic 3: Geographical Information Systems and Remote Sensing for Archaeology and Paleontology). Designed to give students interested in the fields of archaeology, physical anthropology, and paleontology a foundation in the use of geographical information systems (GIS) and the analysis of remotely sensed data from satellites and aerial photographs. Prerequisite: Upper-division standing.

**Topic 34: Iberian Prehistory and History.** The prehistory of Iberia and the historic development of the nation-states of Portugal and Spain. Anthropology 324L (Topic 34) and Latin American Studies 324L (Topic: Iberian Prehistory and History) may not both be counted. Prerequisite: Consent of instructor.

**Topic 35: Indigenous Rights and Autonomy in Mexico.** Explores the relationship between the Mexican government and the indigenous population. Anthropology 324L (Topic 35) and Latin American Studies 324L (Topic: Indigenous Rights and Autonomy in Mexico) may not both be counted.

**Topic 36: Nationalism and Gender in South Asia.** Same as Asian Studies 361 (Topic 26: Nationalism and Gender in South Asia) and Women's and Gender Studies 340 (Topic 24: Nationalism and



Gender in South Asia). Explores why nationalist movements often make the reform of women's roles central to their political projects.

**Topic 37: The Politics of Race and Violence in Brazil.** Same as African and African Diaspora Studies 374E (Topic 2: The Politics of Race and Violence in Brazil) and Latin American Studies 324L (Topic 14: The Politics of Race and Violence in Brazil). Prerequisite: Upper-division standing.

**Topic 38: Race and the Criminal Justice System.** Same as African and African Diaspora Studies 320 (Topic 3: Race and the Criminal Justice System). Social classes, ethnic and racial groups, and their distribution in the urban landscape.

**Topic 39: Theories of Archaeology.** The history of archaeological thought, including the major theoretical trends that have shaped the discipline over time.

**Topic 40: Gender, Sexuality, and the Family in Indian Religions and Cultures.** Same as Asian Studies 372 (Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures), Religious Studies 341 (Topic 3: Gender, Sexuality, and the Family in Indian Religions and Cultures), and Women's and Gender Studies 340 (Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

#### **ANT 325L. Cultural Studies, Public Culture, and Folklore: Selected Topics.**

Consideration of folklore in different culture areas of the Western Hemisphere. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 11: Cultural Heritage on Display.** Explores the public construction and display of traditional American folk culture by studying popular folklife-oriented tourist sites. American Studies 321 (Topic: Cultural Heritage on Display) and Anthropology 325L (Topic 11) may not both be counted.

#### **ANT 325M. Language in Culture and Society.**

Same as Linguistics 373 (Topic 3: Language in Culture and Society) and Sociology 352M (Topic 4: Language in Culture and Society). Language as a cultural resource; functions of language in society; survey of language communities. Three lecture hours a week for one semester. Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.

#### **ANT 325N. Language and Speech in American Society.**

Same as American Studies 321 (Topic 2: Language and Speech in American Society), Linguistics 373 (Topic 2: Language and Speech in American Society), and Sociology 352M (Topic 3: Language and Speech in American Society). Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.

#### **ANT 326C. Native Americans in Texas.**

Same as American Studies 321G. Studies the history of Native Americans in Texas using concepts and evidence from anthropology, history, archaeology, historical geography, and Native American studies. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic: Native Americans in Texas), Anthropology 324L (Topic: Native Americans in Texas), 326C. Prerequisite: Upper-division standing.

#### **ANT 326D. Native Americans in the Plains.**

The ethnohistory of some of the most influential Native American groups on the plains, from the arrival of the Spanish through the reservation period. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic: Native Americans in the Plains), Anthropology 324L (Topic: Native Americans in the Plains), 326D, History 365G (Topic: Native Americans in the Plains). Prerequisite: Upper-division standing.

#### **ANT 326E. Plains Archaeology: Prehistory and History.**

Explores the evidence of human activities on the central and southern plains from prehistoric to historical times (ca. 11,000 BC to ca. AD 1850). Three lecture hours a week for one semester. Anthropology 324L (Topic: Plains Archaeology: Prehistory and History) and 326E may not both be counted. Prerequisite: Upper-division standing.

#### **ANT 326F. Great Discoveries in Archaeology.**

Same as European Studies 346 (Topic 2: Great Discoveries in Archaeology). The stories, myths, and people behind some of the great archaeological discoveries. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Great Discoveries in Archaeology), Anthropology 326F, European Studies 346 (Topic 2). Prerequisite: Upper-division standing.

#### **ANT 326L. Cultures in Contact.**

History of the interactions of the indigenous peoples of the Americas with Africans, Asians, and Europeans over the past five hundred years. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANT 327C. Topics in American Cultures.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

##### **Topic 1: Race and Ethnicity in the United States.**

#### **ANT 327D. Colonial Latin American Archaeology.**

Same as Latin American Studies 324L (Topic 13: Colonial Latin American Archaeology). Focuses on the Spanish colonies in Latin America. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Colonial Latin American Archaeology), 327D, Latin American Studies 324L (Topic 13).

#### **ANT 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Anthropology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Anthropology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **ANT 330C. Theories of Culture and Society.**

Examination of the theoretical approaches that have established the intellectual foundations of contemporary sociocultural anthropology. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.



**ANT 432L. Primate Anatomy.**

Comparative and functional anatomy of primates, including humans; emphasis on adaptations and evolution of the various taxa. Three lecture hours and two laboratory hours a week for one semester. Prerequisite: Anthropology 301.

**ANT 334L. North American Archaeology.**

Regional cultural development of Native American societies from the earliest human occupations to the historic period. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

**ANT 336L. Native American Cultures North of Mexico.**

Same as American Studies 321 (Topic 3: Native American Cultures North of Mexico). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**ANT 340C. Ethnographic Research Methods.**

Introduction to methods used in conducting ethnographic research; emphasis on research design, analysis, writing, and ethical considerations. Three lecture hours a week for one semester. Prerequisite: Anthropology 302, 305, or 307.

**ANT 344K. Films: An Anthropological Perspective.**

Films viewed and discussed. How is cultural meaning communicated? What systems of signification are involved? What are possibilities and limitations of ethnographic films? Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**ANT 345C. Urban Cultures.**

The culture of cities, including the distinctive forms of expressive culture, ethnic and racial conflict, and political or economic activity that cities generate. Three lecture hours a week or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

**ANT 346L. Primate Social Behavior.**

Studies primate behavior and why primates do what they do, including basic theoretical principles and the models used to explain primate behavior. Three lecture hours a week for one semester. Anthropology 346L and 348K (Topic 6: Primate Social Behavior) may not both be counted. Prerequisite: Anthropology 301.

**ANT 346M. Comparative Primate Ecology.**

The basics of how organisms interact with their environment, focusing on a wide range of primates from a comparative perspective. Discusses how various aspects of ecology are used to conserve primate populations. Three lecture hours a week for one semester. Anthropology 346M and 348K (Topic 7: Comparative Primate Ecology) may not both be counted. Prerequisite: Anthropology 301.

**ANT 347C. Methods in Primate Biology.**

The study of primate behavior and the methods by which animal behavior is observed and documented. Students conduct a research project and write a report. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Anthropology 346L, 346M, or Biology 359K with a grade of at least C.

**ANT 348. Human Origins and Evolution.**

Detailed examination and analysis of morphological trends evident in the hominid fossil record. Two lecture hours and two laboratory hours a week for one semester. Prerequisite: Anthropology 301.

**ANT 348K. Current Topics in Physical Anthropology.**

An in-depth study of current topics, controversies, and literature on the evolution, morphology, genetics, and behavioral ecology of primates, including humans. Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Anthropology 301.

**Topic 1: Human Evolution.**

**Topic 8: Evolutionary Anatomy of the Head and Neck.** The comparative and functional anatomy of the head and neck in primates and other mammals.

**Topic 9: Introduction to Primate Anatomy.** Explores the relationship between primate anatomical form and function.

**Topic 10: Primate Conservation.** The theory and practices of conservation biology as applied to primates. Explores species and community characteristics influencing extinction risk, current threats to primates, and potential conservation strategies.

**ANT 349C. Human Variation.**

The patterns of biological variation within and between human populations. Examines physical, genetic, and behavioral traits, and considers both the microevolutionary and cultural processes that influence those traits. Three lecture hours a week for one semester. Anthropology 348K (Topic: Human Variation) and 349C may not both be counted. Prerequisite: Anthropology 301.

**ANT 349D. Anthropological Genetics.**

Basic principles of molecular genetics and population genetics as they relate to the study of humans and other primates. Three lecture hours a week for one semester. Anthropology 348K (Topic: Anthropological Genetics) and 349D may not both be counted. Prerequisite: Anthropology 301.

**ANT 350C. Primate Sensory Ecology.**

An integrated perspective on the comparative anatomy, physiology, and ecological significance of sensory adaptations in primates. Three lecture hours a week for one semester. Anthropology 348K (Topic 5: Primate Sensory Ecology) and 350C may not both be counted. Prerequisite: Anthropology 301.

**ANT 350M. Evolution of Primate Behavior.**

Mechanisms underlying the evolution of human and nonhuman primate behavior. The reasons and ways primates live in social groups; comparisons between human and nonhuman primates using living primates, fossil remains, and archaeological evidence. Three lecture hours a week for one semester. Prerequisite: Anthropology 301.

**ANT 351C. Quechua Language and Society in the Andes I.**

Same as Latin American Studies 351C. Beginning spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 351C, 381C, Latin American Studies 351C, 381C. Prerequisite: Upper-division standing.

**ANT 351D. Quechua Language and Society in the Andes II.**

Same as Latin American Studies 351D. Intermediate spoken Quechua; Quechua folklore. Taught in English. Only one of the following may

be counted: Anthropology 351D, 381D, Latin American Studies 351D, 381D. Prerequisite: Upper-division standing.

#### **ANT 351E. Primate Evolution.**

Examination of the fossil record for nonhuman primate evolution, including basic concepts of the anatomy, ecology, and systematics of living primates. Three lecture hours a week for one semester. Anthropology 348K (Topic 4: Primate Evolution) and 351E may not both be counted. Prerequisite: Anthropology 301.

#### **ANT 453. Archaeological Analysis.**

Derivation of chronology and cultural information from archaeological data; the role of archaeology in modern life. Four lecture hours a week for one semester. Prerequisite: Anthropology 304 or Archaeology 301.

#### **ANT 353E. Archaeological Laboratory Analysis.**

The analysis of artifacts, features, architecture, and other remains recovered in the field. Four and one-half laboratory hours a week for one semester. Anthropology 324L (Topic: Archaeological Laboratory Analysis) and 353E may not both be counted. Prerequisite: Anthropology 662.

#### **ANT 358Q. Supervised Research.**

Individual instruction. Prerequisite: Upper-division standing.

#### **ANT 360K. The Civilization of the Maya.**

Same as Latin American Studies 324L (Topic 10: The Civilization of the Maya). Maya prehistory and history: the archaeological record, codices and inscriptions, and Spanish conquest writings. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANT 361K. The Civilizations of Ancient Mexico.**

Same as Latin American Studies 324L (Topic 11: The Civilizations of Ancient Mexico). Mexican cultures from earliest prehistory to the European conquest. Three lecture hours a week for one semester. Prerequisite: Anthropology 302 and six semester hours of upper-division coursework in social science.

#### **ANT 662. Field Archaeology.**

Two hundred and forty hours of fieldwork. May be repeated for credit, but may be taken only once on the letter-grade basis. May be repeated for credit.

#### **ANT 362K. Archaeology of Texas and Vicinity.**

Cultural history of Texas and neighboring areas, from early prehistoric times to Anglo-American settlements. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANT 462M. Archaeological Techniques.**

Problems in planning, organizing, and carrying out archaeological surveys and excavations. Four lecture hours a week for one semester. Prerequisite: Anthropology 453.

#### **ANT 366. Anatomy and Biology of the Human Skeleton.**

Comprehensive study of the human skeleton, with special attention to methods of identification. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Upper-division standing and Anthropology 301.

#### **ANT 374M. Sociolinguistics.**

Same as Linguistics 374M. An in-depth treatment of current interests in sociolinguistic research literature. Subjects include language and

gender; social, regional, and ethnic dialects of American English; language use in African American communities; language and identity in a pluralistic society; and language, literacy, and education. Three lecture hours a week for one semester. Prerequisite: Anthropology 302 or Linguistics 306.

#### **ANT 376P, 676P. Research Internship.**

Restricted to anthropology majors. Supervised fieldwork in a business or community setting related to the student's career and research interests. Students conduct research and apply anthropological skills to real-world problems. Approximately 150 or 300 hours of fieldwork. May be repeated for credit, but no more than six semester hours may be counted toward the major requirement. Prerequisite: Upper-division standing and consent of instructor.

#### **ANT 379. Problems in Anthropology.**

Supervised individual research on selected problems in anthropology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in anthropology and consent of instructor.

#### **ANT 679H. Honors Tutorial Course.**

For honors candidates in anthropology. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Conference course for two semesters. Prerequisite: For 679HA, admission to the Anthropology Honors Program; for 679HB, Anthropology 679HA.

## **Science, Technology and Society: STS**

### **Lower-Division Courses**

#### **STS 101. Key Ideas and Issues in Science, Technology, and Society.**

Designed to introduce students to the main areas of interest in science, technology, and society. Lectures, readings, and discussions include speakers from various academic disciplines. One lecture hour a week for one semester. Offered on the pass/fail basis only.

#### **STS 311. Topics in Science, Technology, and Society.**

Some topics may include an academic service-learning component; these are identified in the Course Schedule. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **STS 318. How We Shape Discoveries and How They Shape Us.**

Technical, historical, and cultural approaches to the multiple dimensions and complexities of scientific and technological innovation, and how they shape and are shaped by society. Cases for discussion are drawn from energy discoveries, nanoscience, biomedicine, and materials science advances. Three lecture hours a week for one semester.

#### **STS 319. Information Technology and Social Life.**

The impact of technologies on social life, and the necessity for applying skills developed in the liberal arts to managing new ways of life mediated through technologies, including work and home environments. Includes an academic service-learning component. Three lecture hours a week for one semester.

## Upper-Division Courses

### **STS 321. Introduction to Science, Technology, and Society.**

Introduction to the history of communication technology, including how past innovations shaped societies and how current changes are transforming human cultures, universities, and the liberal arts. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework.

### **STS 331. Topics in Science, Technology, and Society.**

Some topics may include an academic service-learning component; these are identified in the Course Schedule. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **STS 332. The Nanotechnology and Science Revolution.**

The societal impacts of nanotechnology and how this emerging technology might transform the future of technologies, manufacturing, and innovation. Three lecture hours a week for one semester. Science, Technology, and Society 331 (Topic: Impacts of Science: Nanotechnology, Technology, and Life) and 332 may not both be counted.

### **STS 360. Senior Seminar in Science, Technology, and Society.**

Senior capstone seminar. Allows the student to integrate the knowledge he or she has gained in the major field of study with that provided by the concentration in science, technology, and society. Three lecture hours a week for one semester. Prerequisite: Completion of at least ninety semester hours of coursework, including Science, Technology, and Society 321.

### **STS 367. Conference Course in Science, Technology, and Society.**

Supervised work on specific projects in science, technology, and society. Three conference hours a week for one semester. May be repeated for credit. Prerequisite: Completion of at least thirty-six semester hours of coursework and approval of written application by the supervising instructor.

### **STS 370. Research Internship.**

Supervised fieldwork in a business or community setting related to the student's career and research interests. Approximately six to ten hours of work a week for one semester, to be arranged with faculty member and internship sponsor. May be repeated for credit, but no more than six semester hours of Science, Technology, and Society 370 may be counted toward the concentration requirement. Prerequisite: Science, Technology, and Society 321, upper-division standing, and consent of instructor.

## Department of Asian Studies

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Asian Studies: ANS

### Lower-Division Courses

#### **ANS 301M. Introduction to Asia.**

Discussion of various problems involving language, history, and culture in Asia. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary.

**Topic 3: History of East Asia to 1800.** Same as History 305K. A survey of the traditional history and culture of China, Japan, Korea, and Vietnam.

**Topic 4: History of East Asia since 1800.** Same as History 305L. A survey of the modern history of China, Japan, Korea, and Vietnam.

**Topic 5: Introduction to the Study of Religion.** Introduction to scholarly methods in the study of religion. Only one of the following may be counted: Asian Studies 301M (Topic 5), Religious Studies 310, Sociology 313K.

**Topic 6: Asia's Futures.** Same as Government 314 (Topic 5: Asia's Futures). Current issues, visible trends, and projections for Asia's future.

**Topic 7: World Philosophy.** Basic issues of philosophy in Western and non-Western traditions, such as the nature of philosophy, its relation to religion and science, the self, knowledge, and virtue. Asian Studies 301M (Topic 7) and Philosophy 302 may not both be counted.

**Topic 10: Introduction to Korean Culture and History.** Introduction to Korea's history, culture, and civilization from antiquity to the present.

**Topic 11: Introduction to Buddhism.** Same as Religious Studies 312C. A structural and historical overview of Buddhism through the examination of various schools, doctrines, biographical narratives, and contemporary ethical issues. Only one of the following may be counted: Asian Studies 301M (Topic 11), Religious Studies 312 (Topic: Introduction to Buddhism), 312C.

**Topic 12: Introduction to Hinduism.** Same as Religious Studies 312D. Only one of the following may be counted: Asian Studies 301M (Topic 12), Religious Studies 312 (Topic: Introduction to Hinduism), 312D.

#### **ANS 301R. History of the Religions of Asia.**

Same as Religious Studies 302. Eastern religions: an introduction to the basic forms and the historical development of the religious traditions of India, China, and Japan. Three lecture hours a week for one semester.

#### **ANS 302C. Introduction to China.**

Same as History 302C. Introduction to Chinese civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 302C, History 302C, 306N (Topic: Introduction to China).

#### **ANS 302J. Introduction to Japan.**

Introduction to Japanese civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for one semester.

#### **ANS 302K. Introduction to India.**

Same as Anthropology 310L (Topic 5: Introduction to India). Introduction to Indian civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for

one semester. Only one of the following may be counted: Anthropology 310L (Topic 5), Asian Studies 302K, History 306N (Topic: Introduction to India).

### **ANS 303M. Introduction to Traditional Musics in World Cultures.**

Open to all University students. Art, sacred, and folk traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required. Asian Studies 303M and Music 303M may not both be counted.

### **ANS 303N. Introduction to Popular Musics in World Cultures.**

Same as Music 303N. Open to all University students. Popular traditions of music in the cultures of Asia, Africa, the Pacific, Europe, and the Americas. Three lecture hours a week for one semester, with one laboratory hour a week as required.

### **ANS 307C. Introduction to the History of India.**

Same as History 307C. Survey of the history of the Indian subcontinent from prehistoric times to the present. Three lecture hours a week for one semester.

### **ANS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Asian Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **ANS 320. Topics in Great Literatures of Asia.**

Conducted in English. Introduction to various Asian literatures, emphasizing philosophical, religious, and social concepts. Three lecture hours a week for one semester. Asian Studies 320 and 361 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **ANS 321M. Politics in Japan.**

Same as Government 321M. Survey of postwar Japanese politics; the occupation, governmental institutions, interest groups, protest movements, industrial policy, the government-business relationship, and political and economic reform. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 321M, 361 (Topic: Politics in Japan), Government 321M. Prerequisite: Six semester hours of lower-division coursework in government.

### **ANS 322M. Politics in China.**

Same as Government 322M. Survey of twentieth-century China: historical trends; 1911 revolution; Warlord-Nationalist period; Communist revolution; post-1949 issues; new social and political institutions. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 322M, 361 (Topic: Politics in China), Government 322M. Prerequisite: Six semester hours of lower-division coursework in government.

### **ANS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Asian Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **ANS 338L. East Asian International Relations.**

Same as Government 338L. Survey of Russian/Soviet, Japanese, Chinese, and American foreign policies of the twentieth century, emphasizing Pacific-region interests; historical policies; intermittent conflicts, such as China versus Japan, Korean War, Indochina Wars; China's emergence as a nuclear power. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 338L, 361 (Topic: East Asian International Relations), Government 338L. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **ANS 340. Studies in Asian Religions.**

Topics in the religions and mythologies of the peoples of Asia. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 4: History of Hindu Religious Traditions.** Same as Anthropology 324L (Topic 23: History of Hindu Religious Traditions), History 364G (Topic 1: History of Hindu Religious Traditions), and Religious Studies 321. History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. Prerequisite: Upper-division standing.

**Topic 5: History of Indian Buddhism.** Same as Religious Studies 322. The institutional, social, economic, and doctrinal history of Buddhism in India. Prerequisite: Upper-division standing or consent of instructor.

**Topic 6: Religion and Rebellion in Modern East Asia.** Nineteenth- and twentieth-century religious movements in East Asia, including both specific movements, such as the Taiping Rebellion, The Boxers, Japanese new religions, Tibetan Buddhism under Communist China, and Aun Shinrikyo, and general trends, such as modern Millenarianism, Shamanism, and ascetic practice. Only one of the following may be counted: Asian Studies 340 (Topic 6), 361 (Topic: Religion/Rebellion in Modern East Asia), History 364G (Topic: Religion/Rebellion in Modern East Asia), Religious Studies 352 (Topic: Religion/Rebellion in Modern East Asia).

**Topic 7: Goddesses in World Religions and Cultures.** Historical and cross-cultural overview of the relationship between feminine and religious cultural expressions through comparative examinations and analyses of various goddess figures in world religions. Only one of the following may be counted: Anthropology 324L (Topic: Goddesses in World Religions and Cultures), Asian Studies 340 (Topic 7), Religious Studies 373 (Topic: Goddesses in World Religions and Cultures), Women's and Gender Studies 340 (Topic: Goddesses in World Religions and Cultures). Prerequisite: Upper-division standing.

**Topic 8: Sufism and Islamic Mysticism.** Explores the importance of the mystical traditions related to Islam in South Asia, the Middle East, Europe, and North America. Only one of the following may be counted: Asian Studies 340 (Topic 8), History 364G (Topic: Sufism and Islamic Mysticism), Islamic Studies 340 (Topic: Sufism and



Islamic Mysticism), Middle Eastern Studies 321K (Topic: Sufism and Islamic Mysticism), Religious Studies 341 (Topic: Sufism and Islamic Mysticism). Prerequisite: Upper-division standing.

**Topic 9: Religion in Japanese History.** Same as Religious Studies 352 (Topic 7: Religion in Japanese History). Examines religious concepts and practices in wider contexts of modern Japanese culture and society. Focuses on the critical understanding of the individual and collective aspects of Japanese spiritual life.

**Topic 10: Ritual and Religion in Korea.** Same as Religious Studies 352 (Topic 4: Ritual and Religion in Korea). Examination of the major religious traditions of Korea. Only one of the following may be counted: Anthropology 324L (Topic: Ritual and Religion in Korea), Asian Studies 340 (Topic 10), Religious Studies 352 (Topic 4). Prerequisite: Upper-division standing.

#### **ANS 340K. Traditional China.**

Same as History 340K. History of China from its beginnings to 1800. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 340K, 361 (Topic: Traditional China), History 340K. Prerequisite: Upper-division standing.

#### **ANS 340L. Post-Mao China: Change and Transformation.**

Same as History 340L. Examines in a historical context the Chinese economy, society, politics, and culture during the reform era that began in the late 1970s. Explores the transformation of rural and urban economies and related social consequences; government systems, political ideologies, and popular values; and China's integration into the global system and its impact on China's role in world politics. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 340L, 361 (Topic: Post-Mao China: Change and Transformation), History 340L, 364G (Topic: Post-Mao China: Change and Transformation). Prerequisite: Upper-division standing.

#### **ANS 340M. Modern China.**

Same as History 340M. History of China from the intrusion of the West circa 1500 to the Communist revolution. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 340N. Communist China.**

Same as History 340N. The history of China from the Communist takeover in 1949 to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 340P. European Expansion in Asia.**

Same as History 340P. European exploration, the commerce of the East India Companies, and the beginnings of empire in South and Southeast Asia from the fifteenth to the early nineteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 340R. European Empires in Asia.**

Same as History 340R. The British in India and Malaya, the Dutch in Indonesia, and the French in Indochina since 1800. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 340S. The Chinese in the United States.**

Same as Asian American Studies 325 (Topic 3: The Chinese in the United States) and History 340S. A lecture and discussion course on the history of the Chinese in the United States from their first arrival in significant numbers during the California Gold Rush of the mid-nineteenth century to the present. Three lecture hours a week for one semester. Only one of the following may be counted: Asian American Studies 325 (Topic: Chinese in the United States), 325 (Topic 3), Asian

Studies 340, History 340S. Partially fulfills the legislative requirement for American history. Prerequisite: Upper-division standing.

#### **ANS 340T. Taiwan: Colonization, Migration, and Identity.**

Same as Asian American Studies 325 (Topic 4: Taiwan: Colonization, Migration, Identity) and History 340T. Explores issues of ethnicity, empire, and modernization in East Asia from the sixteenth century to the present, as seen through encounters between Taiwan and aborigines, Han Chinese, Dutch, Portuguese, the imperial Qing, Japanese, mainland Chinese Nationalist Party (KMT), and the United States. Three lecture hours a week for one semester. Only one of the following may be counted: Asian American Studies 325 (Topic 4), Asian Studies 340T, 361 (Topic: Taiwan: Colonization, Migration, and Identity), History 340T, 364G (Topic: Taiwan: Colonization, Migration, and Identity). Prerequisite: Upper-division standing.

#### **ANS 341K. Origins of Modern Japan.**

Same as History 341K. Japan to the beginnings of the Industrial Revolution, with a focus on the culminating age of samurai rule, the Tokugawa period (1600-1867). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 341M. Imperial Japan.**

Same as History 341M. Japan from the Meiji transformation through war, defeat, and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 341N. Postwar Japan.**

Same as History 342C. Japan since the war and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 342D. Political Economy of Japan.**

Same as History 342D. Historical development of the Japanese economy since early modern times. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 346C. Ancient India.**

Same as History 346C. History and culture of South Asia from its protohistoric beginnings in the Indus Valley through the period of the early empires of the Mauryas and Guptas. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 346D. Medieval India.**

Same as History 346D. History and culture of South Asia from approximately 500 to 1500, with emphasis on religious and political institutions and the emergence of regional cultures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 346M. Muslim India before 1750.**

Same as History 346M and Religious Studies 341 (Topic 6: Muslim India before 1750). The history, art and architecture, and religions of India during the period of Muslim rule from the tenth to the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **ANS 346N. History and Culture of India since 1750.**

Same as History 346N. The period of British rule, the nationalist movement, and independence, with emphasis on the impact of the West on Indian society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**ANS 347K. Governments and Politics of South Asia.**

Same as Government 347K. A survey of political developments, governmental organization, and economic and social problems in South Asia. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

**ANS 348C. Geography of South Asia.**

Same as Geography 348C. Natural regions and cultural landscapes of South Asia. Agriculture, urban structure, issues of environment and development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**ANS 361, 461. Topics in Asian Studies.**

Selected topics in south and east Asian anthropology, economics, history, geography, government, art, music, and philosophy. Three or four lecture hours a week for one semester. Asian Studies 320 and 361 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Contemporary India.** Asian Studies 361 (Topic 3) is same as Anthropology 324L (Topic 16: Contemporary India).

**Topic 5: Cultures of Southeast Asia.** Asian Studies 361 (Topic 5) is same as Anthropology 324L (Topic 8: Cultures of Southeast Asia). Comparative study of the peoples of Indonesia, Burma, Thailand, Malaysia, and other countries. Prerequisite: Upper-division standing.

**Topic 6: Gandhi and Gandhism.** Asian Studies 361 (Topic 6) is same as History 350L (Topic 5: Gandhi and Gandhism) and Religious Studies 341 (Topic 5: Gandhi and Gandhism). Prerequisite: Upper-division standing.

**Topic 9: Modern Japanese Literature in Translation.** Only one of the following may be counted: Asian Studies 361 (Topic 9), 386 (Topic 2: Modern Japanese Literature), Japanese 384 (Topic 3: Modern Japanese Literature). Prerequisite: Upper-division standing or consent of instructor.

**Topic 10: Colonialism and Nationalism.** Asian Studies 361 (Topic 10) is same as Anthropology 324L (Topic 10: Colonialism and Nationalism). Prerequisite: Upper-division standing.

**Topic 11: Musics of India.** Asian Studies 361 (Topic 11) is same as Anthropology 324L (Topic 13: Musics of India) and Music 342 (Topic 3: Musics of India). Prerequisite: Upper-division standing.

**Topic 12: Politics of Economic Development in East Asia.** Asian Studies 361 (Topic 12) is same as Government 365L (Topic 1: Politics of Economic Development in East Asia). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 14: Women in Asian Societies.** Asian Studies 361 (Topic 14) is same as History 350L (Topic 25: Women in Asian Societies) and Women's and Gender Studies 340 (Topic 8: Women in Asian Societies). Prerequisite: Upper-division standing.

**Topic 15: Musics of East and Southeast Asia.** Asian Studies 361 (Topic 15) is same as Music 342 (Topic 6: Musics of East and Southeast Asia). Prerequisite: Upper-division standing.

**Topic 19: Sociology of South Asia.** Asian Studies 361 (Topic 19) is same as Sociology 352M (Topic 10: Sociology of South Asia). A broad overview of South Asian society and culture from a sociological perspective. Prerequisite: Upper-division standing.

**Topic 20: International Environmental Policy.** Asian Studies 361 (Topic 20) is same as Government 365N (Topic 9: International Environmental Policy). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 22: Japanese Foreign Policy.** Asian Studies 361 (Topic 22) is same as Government 365L (Topic 2: Japanese Foreign Policy). An introduction to the foreign and domestic determinants of

Japanese foreign policy. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 23: International Relations of East and Southeast Asia.**

Asian Studies 361 (Topic 23) is same as Government 365L (Topic 3: International Relations of East and Southeast Asia). An introduction to the international relations of East and Southeast Asia, with particular attention to postwar economic and security issues, the changing political landscape of the post-Cold War period, and the development and functions of regional institutions. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 24: The Two Koreas and the United States.** The political, social, and cultural relationship between North and South Korea, and between the Koreas and the United States, since 1945. Only one of the following may be counted: Anthropology 324L (Topic: The Two Koreas and the US), Asian American Studies 325 (Topic: The Two Koreas and the US), Asian Studies 361 (Topic 24), Government 360N (Topic: The Two Koreas and the US), History 364G (Topic: The Two Koreas and the US).

**Topic 25: Capitalism, Consumption, and Civil Society in Korea.** Contemporary social and political life in urban South Korea, including such topics as corporations, factory work, consumption, activism, popular culture, and changing gender systems and roles. Anthropology 324L (Topic: Capitalism, Consumption, and Civil Society in Korea) and Asian Studies 361 (Topic 25) may not both be counted.

**Topic 26: Nationalism and Gender in South Asia.** Asian Studies 361 (Topic 26) is same as Anthropology 324L (Topic 36: Nationalism and Gender in South Asia) and Women's and Gender Studies 340 (Topic 24: Nationalism and Gender in South Asia). Explores why nationalist movements often make the reform of women's roles central to their political projects.

**Topic 27: Anthropology of the Himalayas.** Anthropology 324L (Topic: Anthropology of the Himalayas) and Asian Studies 361 (Topic 27) may not both be counted.

**Topic 28: The Chinese in Diaspora.** Explores narratives of migration, race, ethnicity, and a wide range of experiences of acculturation and assimilation from the perspective of a sending society--China--which has one of the longest and most diverse histories of sending people overseas. Over the last millennia, Chinese have migrated around the world and made homes under a great range of adversity and opportunity, producing many stories of human differences and commonalities. Only one of the following may be counted: Asian American Studies 325 (Topic: Chinese in Diaspora), 325 (Topic 2: The Chinese in Diaspora), Asian Studies 361 (Topic: Chinese in Diaspora), 361, 461 (Topic 28), History 350L (Topic: The Chinese in Diaspora), 350L (Topic 65: The Chinese Diaspora). Prerequisite: Upper-division standing.

**Topic 29: Biomedicine, Ethics, and Culture.** Asian Studies 361 (Topic 29) is same as Religious Studies 373M. Only one of the following may be counted: Anthropology 324L (Topic: Biomedicine, Ethics, and Culture), Asian Studies 361 (Topic: Biomedicine, Ethics, and Culture), 361 (Topic 29), Religious Studies 373 (Topic: Biomedicine, Ethics, and Culture), 373M. Prerequisite: Upper-division standing.

**ANS 362. Research in Asian Studies.**

Individual instruction for Asian studies majors and nonmajors. Discussion, research, and the writing of papers about various general and specialized Asian subjects. Conference course. May be repeated for credit. Prerequisite: Six semester hours of coursework in Asian studies and written consent of instructor on form obtained from the undergraduate adviser.

## **ANS 372. Topics in Asian Cultures.**

Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Indian Philosophies.** Same as Philosophy 348 (Topic 2: Indian Philosophies) and Religious Studies 341 (Topic 1: Indian Philosophies). Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

**Topic 5: Women and Family in Asia.** Same as Women's and Gender Studies 340 (Topic 2: Women and Family in Asia). Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

**Topic 6: Chinese Film and Literature.** Three lecture hours a week for one semester. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing or consent of instructor.

**Topic 7: Chinese Thought and Culture.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

**Topic 12: Perspectives on Japanese Culture.** Same as Anthropology 322M (Topic 1: Perspectives on Japanese Culture). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 13: Gypsy Language and Culture.** Linguistic introduction to Romani; relationship to languages of India; history from 280 BC; modern dialects and international standard language; history and culture as reflected in the language. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 372 (Topic 13); Linguistics 322; Russian, East European, and Eurasian Studies 325 (Topic 1: Gypsy Language and Culture).

**Topic 14: Veiling in the Muslim World.** Same as Islamic Studies 372 (Topic 2: Veiling in the Muslim World), Religious Studies 358 (Topic 5: Veiling in the Muslim World), and Women's and Gender Studies 340 (Topic 11: Veiling in the Muslim World). Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 372 (Topic 14), Islamic Studies 372 (Topic 2), Middle Eastern Studies 322K (Topic 17: Veiling in the Muslim World), Religious Studies 358 (Topic 5), Women's and Gender Studies 340 (Topic 11). Prerequisite: Upper-division standing.

**Topic 15: Early Art of India.** Same as Religious Studies 341 (Topic 10: Early Art of India). Artistic achievements of South Asia up to 1000 CE, with a focus on the function and meaning of works of art within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 17: Women in Modern Japanese Fiction.** Same as Women's and Gender Studies 340 (Topic 12: Women in Modern Japanese Fiction). Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

**Topic 18: Formation of Indian Art.** Same as Religious Studies 341 (Topic 7: Formation of Indian Art). The major artistic achievements of South Asia up to 500 CE, within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 19: Diversity of Indian Traditions.** Same as Religious Studies 341 (Topic 2: Diversity of Indian Traditions). Art and

architecture of South Asia from 1200 to 1900 CE, within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 21: Women and Gender in China.** Same as History 350L (Topic 46: Women and Gender in China) and Women's and Gender Studies 340 (Topic 18: Women and Gender in China). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 24: Buddhist Art.** Same as Religious Studies 341 (Topic 8: Buddhist Art). Three lecture hours a week for one semester. Only one of the following may be counted: Art History 372 (Topic: Buddhist Art), Asian Studies 372 (Topic 24), Religious Studies 341 (Topic 8). Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures.** Same as Anthropology 324L (Topic 40: Gender, Sexuality, and the Family in Indian Religions and Cultures), Religious Studies 341 (Topic 3: Gender, Sexuality, and the Family in Indian Religions and Cultures), and Women's and Gender Studies 340 (Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

**Topic 26: Global Markets and Local Cultures.** Three lecture hours a week for one semester. Anthropology 324L (Topic: Global Markets and Local Cultures) and Asian Studies 372 (Topic 26) may not both be counted. Prerequisite: Upper-division standing.

## **ANS 678H. Honors Tutorial Course.**

Three lecture hours a week for two semesters. Prerequisite: For 678HA, credit or registration for Asian Studies 378 and admission to the Asian Studies Honors Program; for 678HB, Asian Studies 678HA.

## **ANS 379. Capstone Seminars in Asian Studies.**

Discussion and research-based course with Pan-Asian content. Three lecture hours a week for one semester. May not be counted by students with credit for Asian Studies 378. May be repeated for credit when the topics vary. Prerequisite: For majors in Asian studies and Asian cultures and languages, twelve semester hours of upper-division coursework in Asian studies or Asian languages; for others, upper-division standing.

**Topic 1: Writing and Authority in Early China.** Only one of the following may be counted: Asian Studies 372 (Topic: Writing and Authority: Early China), 379 (Topic 1), History 364G (Topic: Writing and Authority: Early China).

**Topic 2: South Asian Saints and Yogis.** Only one of the following may be counted: Anthropology 324L (Topic: South Asian Saints and Yogis), Asian Studies 340 (Topic: South Asian Saints and Yogis), 379 (Topic 2), Religious Studies 341 (Topic: South Asian Saints and Yogis).

**Topic 3: The Art of the Body in India.** Only one of the following may be counted: Anthropology 322M (Topic: Art of the Body in India), Asian Studies 372 (Topic: Art of the Body in India), 379 (Topic 3), and Women's and Gender Studies 340 (Topic: Art of the Body in India).

**Topic 4: Indian Poetry and Religions.** Only one of the following may be counted: Asian Studies 340 (Topic: Indian Poetry and Religions), 379 (Topic 4), Religious Studies 341 (Topic: Indian Poetry and Religions).



### **ANS 379H. Honors Tutorial Course.**

Supervised research, readings, and writing of a substantial paper on a particular Asian topic. Conference course. Prerequisite: Upper-division standing, Asian Studies 378 with a grade of at least B, admission to the Asian Studies Honors Program no later than two semesters before expected graduation, a University grade point average of at least 3.00, and a grade point average in Asian studies of at least 3.50.

## **Bengali: BEN**

### **Lower-Division Courses**

#### **BEN 506. First-Year Bengali I.**

Not open to native speakers of Bengali. Five class hours a week for one semester.

#### **BEN 507. First-Year Bengali II.**

Not open to native speakers of Bengali. Continuation of Bengali 506. Five class hours a week for one semester. Prerequisite: Bengali 506 with a grade of at least C.

#### **BEN 312K. Second-Year Bengali I.**

Not open to native speakers of Bengali. Three class hours a week for one semester. Prerequisite: Bengali 507 with a grade of at least C.

#### **BEN 312L. Second-Year Bengali II.**

Not open to native speakers of Bengali. Continuation of Bengali 312K. Three class hours a week for one semester. Prerequisite: Bengali 312K with a grade of at least C.

#### **BEN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Bengali.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **BEN 320K. Advanced Bengali I.**

Not open to native speakers of Bengali. Three class hours a week for one semester. Prerequisite: Bengali 312L with a grade of at least C.

#### **BEN 320L. Advanced Bengali II.**

Not open to native speakers of Bengali. Continuation of Bengali 320K. Three class hours a week for one semester. Prerequisite: Bengali 320K with a grade of at least C.

#### **BEN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Bengali.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **BEN 360. Conference Course in Bengali Language and Literature.**

Supervised individual study of selected problems in Bengali language and literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## **Chinese: CHI**

### **Lower-Division Courses**

#### **CHI 604. Accelerated First-Year Chinese.**

Designed for students who understand or speak but do not read or write Mandarin Chinese. Six class hours a week for one semester. Chinese 604 and 506 may not both be counted; Chinese 604 and 507 may not both be counted. Prerequisite: Results on the placement examination in Chinese that indicate that the student is ineligible to receive credit for Chinese 507. If the student is eligible to receive credit by examination for Chinese 506, this credit must not appear on the student's record.

#### **CHI 506 (TCCN: CHIN 1511). First-Year Chinese I.**

Not open to students who understand or speak Mandarin Chinese. Modern Standard Chinese (Mandarin). Six class hours a week for one semester. Chinese 604 and 506 may not both be counted.

#### **CHI 507 (TCCN: CHIN 1512). First-Year Chinese II.**

Not open to native speakers of Chinese. Continuation of Chinese 506. Six class hours a week for one semester. Chinese 604 and 507 may not both be counted. Prerequisite: Chinese 506 with a grade of at least C.

#### **CHI 612. Accelerated Second-Year Chinese.**

Continuation of Chinese 604. Six class hours a week for one semester. Chinese 612 and 412K may not both be counted; Chinese 612 and 412L may not both be counted. Prerequisite: Chinese 604 with a grade of at least C.

#### **CHI 412K. Second-Year Chinese I.**

Not open to native speakers of Chinese. Modern Standard Chinese (Mandarin). Four class hours a week for one semester. Chinese 612 and 412K may not both be counted. Prerequisite: Chinese 507 with a grade of at least C.

#### **CHI 412L. Second-Year Chinese II.**

Not open to native speakers of Chinese. Continuation of Chinese 412K. Four class hours a week for one semester. Chinese 612 and 412L may not both be counted. Prerequisite: Chinese 412K with a grade of at least C.

#### **CHI 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Chinese.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.



## Upper-Division Courses

### CHI 320K. Readings in Modern Chinese I.

Readings in expository prose: selections from journals, newspapers, and other sources. Three lecture hours a week for one semester. Prerequisite: Chinese 612 or 412L with a grade of at least C.

### CHI 320L. Readings in Modern Chinese II.

Readings in modern fiction, poetry, and drama. Three lecture hours a week for one semester. Prerequisite: Chinese 320K with a grade of at least C.

### CHI 322. Introduction to Classical Chinese.

Beginning study of wen yen, the particles, and syntax of the Chinese classics. Three lecture hours a week for one semester. Prerequisite: Chinese 612 or 412L with a grade of at least C.

### CHI 325K. Advanced Conversation I.

Not open to native speakers of Chinese. Drill in conversation on general topics. Three lecture hours a week for one semester. Prerequisite: Chinese 412L with a grade of at least C.

### CHI 325L. Advanced Conversation II.

Not open to native speakers of Chinese. Practice in speaking Modern Standard Chinese. Three lecture hours a week for one semester. Prerequisite: Chinese 325K with a grade of at least C.

### CHI 326. Business Chinese.

Advanced Chinese conversation, with emphasis on business vocabulary. Three lecture hours a week for one semester. Chinese 326 and 330 (Topic: Business Chinese) may not both be counted. Prerequisite: Chinese 612, 320K, or 325K with a grade of at least C.

### CHI 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Chinese.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### CHI 330. Topics in Advanced Chinese.

Fourth-year Chinese readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Chinese 320K and 320L with a grade of at least C in each.

### CHI 130D. Chinese across Disciplines.

Reading and discussion of Chinese language materials related to the subject matter of another designated course in Asian studies. Meetings with the instructor will be devoted to the discussion of linguistic problems, literary features, and crucial passages. Individual instruction. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, concurrent enrollment in an appropriate Asian studies course, and written consent of instructor on form obtained from the undergraduate adviser.

### CHI 340. Topics in Chinese Literature.

Study of Chinese literary texts in the original. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Chinese 320L with a grade of at least C.

### CHI 360. Conference Course in Chinese Language and Literature.

Supervised individual study of selected problems in Chinese language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## Hindi: HIN

### Lower-Division Courses

#### HIN 604. Accelerated First-Year Hindi.

Not open to native speakers of Hindi. Modern Hindi of India. Eight class hours a week for one semester. Hindi 604 and 506 may not both be counted; Hindi 604 and 507 may not both be counted; Hindi 604 and Urdu 604 may not both be counted; Hindi 604 and Urdu 506 may not both be counted; Hindi 604 and Urdu 507 may not both be counted.

#### HIN 506. First-Year Hindi I.

Not open to native speakers of Hindi. Modern Hindi of India. Five class hours a week for one semester. Hindi 604 and 506 may not both be counted; Hindi 506 and Urdu 604 may not both be counted.

#### HIN 507. First-Year Hindi II.

Not open to native speakers of Hindi. Continuation of Hindi 506. Five class hours a week for one semester. Hindi 604 and 507 may not both be counted; Hindi 507 and Urdu 604 may not both be counted. Prerequisite: Hindi 506 with a grade of at least C.

#### HIN 612. Accelerated Second-Year Hindi.

Continuation of Hindi 604. Eight class hours a week for one semester. Hindi 612 and 312K may not both be counted; Hindi 612 and 312L may not both be counted. Prerequisite: Hindi 604 with a grade of at least C.

#### HIN 312K. Second-Year Hindi I.

Not open to native speakers of Hindi. Modern Hindi of India. Three lecture hours a week for one semester. Hindi 612 and 312K may not both be counted. Prerequisite: Hindi 507 with a grade of at least C.

#### HIN 312L. Second-Year Hindi II.

Not open to native speakers of Hindi. Continuation of Hindi 312K. Three lecture hours a week for one semester. Hindi 612 and 312L may not both be counted. Prerequisite: Hindi 312K with a grade of at least C.

#### HIN 118. Practice in Spoken Hindi.

Not open to native speakers of Hindi. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Hindi 507 with a grade of at least C.

#### HIN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Hindi.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser of the Department of Asian Studies. University credit

is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### HIN 125. Advanced Practice in Spoken Hindi.

Instruction and practice in conversation for advanced students. Two lecture hours a week for one semester. Prerequisite: Hindi 118 with a grade of at least C.

### HIN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Hindi.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in affiliated studies program. May be repeated for credit when the topics vary.

### HIN 330. Topics in Hindi Language and Literature.

Study of specific subjects related to Hindi culture as reflected in its literary productions and other modes of expression. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Hindi 312L with a grade of at least C.

**Topic 1: Contemporary Hindi Narratives.** Designed to enhance all four language skills: reading, writing, speaking, and listening. Hindi 330 (Topic 1) and 384 (Topic 4: Contemporary Hindi Narratives) may not both be counted.

**Topic 2: Hindi Drama and Film.** Contemporary Hindi plays and film scripts in Devanagari script. Hindi 330 (Topic 2) and 384 (Topic 5: Hindi Drama and Film) may not both be counted.

**Topic 3: Hindi Literature in the Nationalist Era.** Examines the poetry and prose of a diverse group of writers who shaped Hindi literature during the nationalist era. Also includes critical studies in English. Hindi 330 (Topic 3) and 384 (Topic 6: Hindi Literature in the Nationalist Era) may not both be counted.

**Topic 4: Language and Identity at the Margins of Hindi Fiction.** Focuses on the stories and novels of a diverse group of writers, including Muslims, women, Biharis, and Marwaris, who have broadened the landscape of Hindi writing. Hindi 330 (Topic 4) and 384 (Topic 7: Language and Identity at the Margins of Hindi Fiction) may not both be counted.

### HIN 431K, 531K, 631K. Flagship Hindi I.

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 431L, 531L, 631L. Flagship Hindi II.

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 432K, 532K, 632K. Flagship Hindi III.

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 432L, 532L, 632L. Flagship Hindi IV.

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 433K, 533K, 633K. Flagship Hindi V.

Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 433L, 533L, 633L. Flagship Hindi VI.

Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 434K, 534K, 634K. Flagship Hindi VII.

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 434L, 534L, 634L. Flagship Hindi VIII.

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### HIN 360. Conference Course in Hindi Language and Literature.

Supervised individual study of selected problems in Hindi language and literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## Japanese: JPN

### Lower-Division Courses

#### JPN 601D. Japanese I.

Not open to native speakers of Japanese. Designed for students with no previous coursework in Japanese. Emphasis on basic skills in listening and speaking Japanese and in reading and writing hiragana, katakana, and kanji. Introduction to Japanese culture. Includes computer-assisted instruction. Six lecture hours a week for one semester. Japanese 601D and 506 may not both be counted.

#### JPN 506 (TCCN: JAPN 1511). First-Year Japanese I.

Not open to native speakers of Japanese. Six class hours a week for one semester. Japanese 601D and 506 may not both be counted.

#### JPN 507 (TCCN: JAPN 1512). First-Year Japanese II.

Not open to native speakers of Japanese. Six class hours a week for one semester. Japanese 507 and 610D may not both be counted. Prerequisite: Japanese 506 with a grade of at least C.

#### JPN 610D. Japanese II.

Not open to native speakers of Japanese. Expands on skills acquired in Japanese 601D or its equivalent. Includes computer-assisted instruction. Six lecture hours a week for one semester. Japanese 507 and 610D may not both be counted. Prerequisite: Japanese 601D or 506 with a grade of at least C.

#### JPN 611D. Intermediate Japanese.

Not open to native speakers of Japanese. Intermediate level of competency in Japanese to enable students to function in a variety of real-life contexts. Six lecture hours a week for one semester. Japanese 611D and 412K may not both be counted. Japanese 611D and 412L

may not both be counted. Prerequisite: Japanese 507 or 610D with a grade of at least C.

### **JPN 412K. Second-Year Japanese I.**

Not open to native speakers of Japanese. Five class hours a week for one semester. Japanese 611D and 412K may not both be counted. Prerequisite: Japanese 507 or the equivalent with a grade of at least C.

### **JPN 412L. Second-Year Japanese II.**

Not open to native speakers of Japanese. Five class hours a week for one semester. Japanese 611D and 412L may not both be counted. Japanese 412L and 317C may not both be counted. Prerequisite: Japanese 412K or the equivalent with a grade of at least C.

### **JPN 317C. Japanese Grammar, Composition, and Conversation.**

Not open to native speakers of Japanese. Designed to prepare students for specialized advanced Japanese language courses. Three lecture hours a week for one semester. Japanese 412L and 317C may not both be counted. Prerequisite: Japanese 611D with a grade of at least C.

### **JPN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Japanese.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **JPN 320K. Readings in Modern Japanese I.**

Not open to native speakers of Japanese. Exploration of different types of texts written in a variety of grammar structures with rich vocabulary. Examination of similarities and differences between various aspects of Japanese culture and the student's own culture. Three lecture hours a week for one semester. Prerequisite: Japanese 412L or 317C with a grade of at least C.

### **JPN 320L. Readings in Modern Japanese II.**

Not open to native speakers of Japanese. Continued development of Japanese reading and comprehension skills using authentic print and web-based resources. Three lecture hours a week for one semester. Prerequisite: Japanese 320K with a grade of at least C.

### **JPN 322. Classical Japanese.**

An introduction to the principal elements of premodern literary or "classical" Japanese (bungo), the standard form of the written language. A survey of the principal linguistic features, close reading, and translation of a variety of prose and poetry texts. Three lecture hours a week for one semester. Japanese 322 and 384 (Topic 1: Classical Japanese) may not both be counted. Prerequisite: Japanese 320L with a grade of at least C.

### **JPN 325K. Advanced Conversation I.**

Not open to native speakers of Japanese. Conversations on more complex situations and topics, including formal and informal contexts; designed to continue students' development of conversation skills taught in Japanese 412L and 317C. Three lecture hours a week for

one semester. Prerequisite: Japanese 412L or 317C with a grade of at least C.

### **JPN 325L. Advanced Conversation II.**

Not open to native speakers of Japanese. Continued development of conversation skills taught in Japanese 325K. Three lecture hours a week for one semester. Prerequisite: Japanese 325K with a grade of at least C.

### **JPN 326. Business Japanese.**

Not open to native speakers of Japanese. Development of basic business manners and business-related vocabulary and conversation skills appropriate in an office environment. Three lecture hours a week for one semester. Prerequisite: Japanese 412L or 317C with a grade of at least C.

### **JPN 327. Advanced Reading and Writing of Kanji Characters.**

Not open to native speakers of Japanese. Building more advanced vocabulary and kanji knowledge through systematic study (recognition, reading, and writing) of kanji. Three lecture hours a week for one semester. Prerequisite: Japanese 412L or 317C with a grade of at least C.

### **JPN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Japanese.**

Not open to native speakers of Japanese. This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **JPN 330. Topics in Advanced Japanese.**

Not open to native speakers of Japanese. Fourth-year Japanese readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Japanese 320L with a grade of at least C.

#### **Topic 1: Intensive Advanced Japanese Language: Japan.**

Taught in Japan in Japanese. Emphasizes reading skills and conversation.

#### **Topic 2: Advanced Readings in Newspaper Articles.** For students with an advanced level of proficiency in Japanese.

Conducted in Japanese. Readings from newspaper articles and other authentic materials, including short stories and websites, selected to expand linguistic and social knowledge, vocabulary, and knowledge of kanji.

**Topic 3: Practical Readings in Advanced Japanese.** For students with an advanced level of proficiency in Japanese. Conducted in Japanese. Readings selected to promote a wide variety of reading skills such as scanning, skimming, prediction, reading for details, and reading for meaning. Readings include essays, comic strips, short stories, websites, magazine and newspaper articles, and other authentic materials.

### **JPN 130D. Japanese across Disciplines.**

Reading and discussion of Japanese language materials related to the subject matter of another designated course in Asian studies. Meetings with the instructor will be devoted to the discussion of linguistic problems, literary features, and crucial passages. Individual

instruction. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, concurrent enrollment in an appropriate Asian studies course, and written consent of instructor on form obtained from the undergraduate adviser.

### **JPN 360. Conference Course in Japanese Language and Literature.**

Not open to native speakers of Japanese. Supervised individual study of selected problems in Japanese language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing, six semester hours of upper-division coursework in Japanese, and written consent of instructor on form obtained from the undergraduate adviser.

## **Korean: KOR**

### **Lower-Division Courses**

#### **KOR 604. Accelerated First-Year Korean.**

Designed for students who understand or speak but do not read or write Korean. Not open to native speakers of Korean. Six class hours a week for one semester. Korean 604 and 506 may not both be counted; Korean 604 and 507 may not both be counted. Prerequisite: Results on the placement examination in Korean that indicate that the student is ineligible to receive credit for Korean 507. If the student is eligible to receive credit by examination for Korean 506, this credit must not appear on the student's record.

#### **KOR 506 (TCCN: KORE 1511). First-Year Korean I.**

Not open to native speakers of Korean. Five class hours a week for one semester. Korean 604 and 506 may not both be counted.

#### **KOR 507 (TCCN: KORE 1512). First-Year Korean II.**

Not open to native speakers of Korean. Continuation of Korean 506. Five class hours a week for one semester. Korean 604 and 507 may not both be counted. Prerequisite: Korean 506 with a grade of at least C.

#### **KOR 612. Accelerated Second-Year Korean.**

Not open to native speakers of Korean. Continuation of Korean 604. Six class hours a week for one semester. Korean 612 and 412K may not both be counted; Korean 612 and 412L may not both be counted. Prerequisite: Korean 604 with a grade of at least C.

#### **KOR 412K. Second-Year Korean I.**

Not open to native speakers of Korean. Four lecture hours a week for one semester. Korean 612 and 412K may not both be counted. Prerequisite: Korean 507 with a grade of at least C.

#### **KOR 412L. Second-Year Korean II.**

Not open to native speakers of Korean. Four lecture hours a week for one semester. Korean 612 and 412L may not both be counted. Prerequisite: Korean 412K with a grade of at least C.

#### **KOR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Korean.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit

is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **KOR 320K. Third-Year Korean I.**

Three lecture hours a week for one semester. Prerequisite: Korean 612 or 412L with a grade of at least C.

#### **KOR 320L. Third-Year Korean II.**

Three lecture hours a week for one semester. Prerequisite: Korean 320K with a grade of at least C.

#### **KOR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Korean.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **KOR 330. Topics in Advanced Korean.**

Fourth-year Korean readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Korean 320L with a grade of at least C.

#### **KOR 360. Conference Course in Korean Language and Literature.**

Supervised individual study of selected problems in Korean language or literature. Conference course. May be repeated for credit. Prerequisite: Korean 412K and written consent of instructor on form obtained from the undergraduate adviser.

## **Malayalam: MAL**

### **Lower-Division Courses**

#### **MAL 506. First-Year Malayalam I.**

Standard Malayalam of Kerala. Five class hours a week for one semester.

#### **MAL 507. First-Year Malayalam II.**

Five class hours a week for one semester. Prerequisite: Malayalam 506 with a grade of at least C.

#### **MAL 312K. Second-Year Malayalam I.**

Three lecture hours a week for one semester. Prerequisite: Malayalam 507 with a grade of at least C.

#### **MAL 312L. Second-Year Malayalam II.**

Three lecture hours a week for one semester. Prerequisite: Malayalam 312K with a grade of at least C.

#### **MAL 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Malayalam.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's



Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### **MAL 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Malayalam.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser for the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **MAL 330. Topics in Malayalam Language and Literature.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Malayalam 312L with a grade of at least C.

### **MAL 360. Conference Course in Malayalam Language and Literature.**

Supervised individual study of selected problems in Malayalam language or literature. Conference course. May be repeated for credit. Prerequisite: Malayalam 312L and written consent of instructor on form obtained from the undergraduate adviser.

## Pashto: PSH

### Lower-Division Courses

#### **PSH 506. First-Year Pashto I.**

Not open to native speakers of Pashto. Emphasis on basic skills: listening, speaking, reading, and writing. Five lecture hours a week for one semester.

#### **PSH 507. First-Year Pashto II.**

Not open to native speakers of Pashto. Continuation of Pashto 506, with emphasis on basic skills: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Prerequisite: Pashto 506 with a grade of at least C.

#### **PSH 312K. Second-Year Pashto I.**

Not open to native speakers of Pashto. Listening, speaking, reading, and writing skills in Pashto at the second-year level. Three lecture hours a week for one semester. Prerequisite: Pashto 507 with a grade of at least C.

#### **PSH 312L. Second-Year Pashto II.**

Not open to native speakers of Pashto. Listening, speaking, reading, and writing Pashto at the advanced second-year level. Three lecture hours a week for one semester. Prerequisite: Pashto 312K with a grade of at least C.

### **PSH 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Pashto.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's

Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### **PSH 320K. Readings in Modern Pashto I.**

Readings in expository prose: selections from journals, newspapers, and other sources. Three lecture hours a week for one semester. Prerequisite: Pashto 312L with a grade of at least C.

### **PSH 320L. Readings in Modern Pashto II.**

Readings in modern fiction, poetry, and drama. Three lecture hours a week for one semester. Prerequisite: Pashto 320K with a grade of at least C.

### **PSH 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Pashto.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **PSH 330. Topics in Advanced Pashto.**

Fourth-year Pashto readings on special topics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Pashto 320K and 320L with a grade of at least C in each.

## Sanskrit: SAN

### Lower-Division Courses

#### **SAN 506. First-Year Sanskrit I.**

Introduction to basic grammatical principles, with reading of Ramayana episodes as illustrations. Five class hours a week for one semester.

#### **SAN 507. First-Year Sanskrit II.**

Detailed study of problems of grammar and syntax; reading of extracts from Hitopadesha and the Bhagavad Gita. Five class hours a week for one semester. Prerequisite: Sanskrit 506 with a grade of at least C.

#### **SAN 312K. Second-Year Sanskrit I.**

Introduction to classical Sanskrit prose literature; readings from the Epics and Kathasaritsagara. Three lecture hours a week for one semester. Prerequisite: Sanskrit 507 with a grade of at least C.

#### **SAN 312L. Second-Year Sanskrit II.**

Introduction to classical Sanskrit poetry and philosophical literature; readings from the Upanishads and Kalidasa's Meghaduta. Three lecture hours a week for one semester. Prerequisite: Sanskrit 312K with a grade of at least C.

**SAN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Sanskrit.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

**SAN 325K. Advanced Sanskrit Readings and Composition I.**

Three lecture hours a week for one semester. Prerequisite: Sanskrit 312L with a grade of at least C.

**SAN 325L. Advanced Sanskrit Readings and Composition II.**

Three lecture hours a week for one semester. Prerequisite: Sanskrit 325K with a grade of at least C.

**SAN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Sanskrit.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**SAN 330. Topics in Sanskrit Language and Literature.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Sanskrit 312L with a grade of at least C.

**SAN 360. Conference Course in Sanskrit Language and Literature.**

Supervised individual study of selected problems in Sanskrit language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing, Sanskrit 312L, and written consent of instructor on form obtained from the undergraduate adviser.

## Tamil: TAM

### Lower-Division Courses

**TAM 604. Accelerated First-Year Tamil.**

Not open to native speakers of Tamil. Designed for students who understand or speak but do not read or write Tamil. Six class hours a week for one semester. Tamil 604 and 506 may not both be counted; Tamil 604 and 507 may not both be counted.

**TAM 506. First-Year Tamil I.**

Not open to native speakers of Tamil. Five lecture hours a week for one semester. Tamil 506 and 604 may not both be counted.

**TAM 507. First-Year Tamil II.**

Not open to native speakers of Tamil. Five lecture hours a week for one semester. Tamil 604 and 507 may not both be counted. Prerequisite: Tamil 506 with a grade of at least C.

**TAM 612. Accelerated Second-Year Tamil.**

Not open to native speakers of Tamil. Continuation of Tamil 604. Designed for students who understand or speak but do not read or write Tamil. Six class hours a week for one semester. Tamil 612 and 312K may not both be counted; Tamil 612 and 312L may not both be counted. Prerequisite: Tamil 604 with a grade of at least C.

**TAM 312K. Second-Year Tamil I.**

Not open to native speakers of Tamil. Three lecture hours a week for one semester. Tamil 612 and 312K may not both be counted. Prerequisite: Tamil 507 with a grade of at least C.

**TAM 312L. Second-Year Tamil II.**

Not open to native speakers of Tamil. Three lecture hours a week for one semester. Tamil 612 and 312L may not both be counted. Prerequisite: Tamil 312K with a grade of at least C.

### Upper-Division Courses

**TAM 320K. Advanced Tamil I.**

Not open to native speakers of Tamil. Three lecture hours a week for one semester. Prerequisite: Tamil 312L with a grade of at least C.

**TAM 320L. Advanced Tamil II.**

Not open to native speakers of Tamil. Three lecture hours a week for one semester. Prerequisite: Tamil 320K with a grade of at least C.

**TAM 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Tamil.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**TAM 330. Topics in Tamil Language and Literature.**

Not open to native speakers of Tamil. Study of specific subjects related to South Asian culture as reflected in Tamil literary productions and other modes of expression. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Tamil 312L with a grade of at least C.

**TAM 360. Conference Course in Tamil Language and Literature.**

Supervised individual study of selected problems in Tamil language and literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## Telugu: TEL

### Lower-Division Courses

#### TEL 604. Accelerated First-Year Telugu.

Six lecture hours a week for one semester. Telugu 604 and 506 may not both be counted; Telugu 604 and 507 may not both be counted.

#### TEL 506. First-Year Telugu I.

Not open to native speakers of Telugu. Five class hours a week for one semester. Telugu 604 and 506 may not both be counted.

#### TEL 507. First-Year Telugu II.

Not open to native speakers of Telugu. Five class hours a week for one semester. Telugu 604 and 507 may not both be counted. Prerequisite: Telugu 506 with a grade of at least C.

#### TEL 612. Accelerated Second-Year Telugu.

Continuation of Telugu 604. Six lecture hours a week for one semester. Telugu 612 and 312K may not both be counted; Telugu 612 and 312L may not both be counted. Prerequisite: Telugu 604.

#### TEL 312K. Second-Year Telugu I.

Not open to native speakers of Telugu. Three lecture hours a week for one semester. Telugu 612 and 312K may not both be counted. Prerequisite: Telugu 507 with a grade of at least C.

#### TEL 312L. Second-Year Telugu II.

Not open to native speakers of Telugu. Three lecture hours a week for one semester. Telugu 612 and 312L may not both be counted. Prerequisite: Telugu 312K with a grade of at least C.

#### TEL 118K. Practice in Spoken Telugu.

Not open to native speakers of Telugu. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Telugu 507 with a grade of at least C.

#### TEL 118L. Practice in Spoken Telugu II.

Not open to native speakers of Telugu. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Telugu 312K or 118K with a grade of at least C.

### Upper-Division Courses

#### TEL 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Telugu.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### TEL 330. Telugu Language and Literature.

Three lecture hours a week for one semester. Prerequisite: Telugu 312L with a grade of at least C.

#### TEL 360. Conference Course in Telugu Language and Literature.

Individual instruction. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## Urdu: URD

### Lower-Division Courses

#### URD 604. Accelerated First-Year Urdu.

Not open to native speakers of Urdu. Eight class hours a week for one semester. Hindi 604 and Urdu 604 may not both be counted; Hindi 506 and Urdu 604 may not both be counted; Hindi 507 and Urdu 604 may not both be counted; Urdu 604 and 506 may not both be counted; Urdu 604 and 507 may not both be counted.

#### URD 506. First-Year Urdu I.

Not open to native speakers of Urdu. Five class hours a week for one semester. Urdu 604 and 506 may not both be counted.

#### URD 507. First-Year Urdu II.

Not open to native speakers of Urdu. Five class hours a week for one semester. Urdu 604 and 507 may not both be counted. Prerequisite: Urdu 506 with a grade of at least C.

#### URD 612. Accelerated Second-Year Urdu.

Continuation of Urdu 604. Eight lecture hours a week for one semester. Urdu 612 and 312K may not both be counted; Urdu 612 and 312L may not both be counted. Prerequisite: Urdu 604 with a grade of at least C.

#### URD 312K. Second-Year Urdu I.

Not open to native speakers of Urdu. Introduction to the Urdu script, followed by Urdu reading, composition, and conversation. Three lecture hours a week for one semester. Urdu 612 and 312K may not both be counted. Prerequisite: Urdu 507 with a grade of at least C.

#### URD 312L. Second-Year Urdu II.

Not open to native speakers of Urdu. Continuation of Urdu 312K. Three lecture hours a week for one semester. Urdu 612 and 312L may not both be counted. Prerequisite: Urdu 312K with a grade of at least C.

#### URD 118K. Practice in Spoken Urdu I.

Not open to native speakers of Urdu. Instruction and practice in conversation for intermediate-level students. Two lecture hours a week for one semester. Prerequisite: Urdu 507 with a grade of at least C.

#### URD 118L. Practice in Spoken Urdu II.

Not open to native speakers of Urdu. Two lecture hours a week for one semester. Prerequisite: Urdu 118K with a grade of at least C.

### Upper-Division Courses

#### URD 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Urdu.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as

coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **URD 330. Topics in Urdu Language and Literature.**

Study of specific subjects related to Urdu culture as reflected in literary productions and other modes of expression. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Urdu 312L with a grade of at least C.

**Topic 1: Female Voices in Urdu Literature.** Survey of prose and poetry written in Urdu by women during the last three centuries.

Only one of the following may be counted: Religious Studies 341 (Topic: Female Voices in Urdu Literature), Urdu 330 (Topic 1), 384 (Topic 4: Female Voices in Urdu Literature).

**Topic 2: Love and Devotion in Urdu Literature.** Examination of various literary genres that are shaped by discourses on the love of God and devotion to the prophet Muhammad. Urdu 330 (Topic 2) and 384 (Topic 5: Love and Devotion in Urdu Literature) may not both be counted.

**Topic 3: Philosophy and Poetry of Iqbal.** Explores the prose and poetry written by the most influential twentieth-century Muslim reformer in South Asia, Muhammad Iqbal. Urdu 330 (Topic 3) and 384 (Topic 6: Philosophy and Poetry of Iqbal) may not both be counted.

**Topic 4: Urdu Aesthetics.** Intensive overview of the most popular lyrical genre of Urdu poetry, the ghazal, and the standards used to judge a good ghazal. Urdu 330 (Topic 4) and 384 (Topic 7: Urdu Aesthetics) may not both be counted.

### **URD 431K, 531K, 631K. Flagship Urdu I.**

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 431L, 531L, 631L. Flagship Urdu II.**

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 432K, 532K, 632K. Flagship Urdu III.**

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 432L, 532L, 632L. Flagship Urdu IV.**

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 433K, 533K, 633K. Flagship Urdu V.**

Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 433L, 533L, 633L. Flagship Urdu VI.**

Students attend a variety of language and area studies courses at one or more universities in India. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 434K, 534K, 634K. Flagship Urdu VII.**

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 434L, 534L, 634L. Flagship Urdu VIII.**

For each semester hour of credit earned, one lecture hour a week for one semester. Prerequisite: Consent of instructor.

### **URD 360. Conference Course in Urdu Language and Literature.**

Supervised individual study of selected problems in Urdu language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## **Vietnamese: VTN**

### **Lower-Division Courses**

#### **VTN 604. Accelerated First-Year Vietnamese.**

Designed for students who understand or speak but do not read or write Vietnamese. Six class hours a week for one semester. Vietnamese 604 and 506 may not both be counted; Vietnamese 604 and 507 may not both be counted. Prerequisite: Results on the placement examination in Vietnamese that indicate the student is ineligible to receive credit for Vietnamese 507. If the student is eligible to receive credit by examination for Vietnamese 506, credit must not appear on the student's record.

#### **VTN 506 (TCCN: VIET 1511). First-Year Vietnamese I.**

Not open to native speakers of Vietnamese. Five class hours a week for one semester. Vietnamese 604 and 506 may not both be counted. Prerequisite: Results on the placement examination in Vietnamese that indicate the student is ineligible to receive credit by examination for Vietnamese 506 and 604.

#### **VTN 507 (TCCN: VIET 1512). First-Year Vietnamese II.**

Not open to native speakers of Vietnamese. Five class hours a week for one semester. Vietnamese 604 and 507 may not both be counted. Prerequisite: Vietnamese 506 with a grade of at least C.

#### **VTN 612. Accelerated Second-Year Vietnamese.**

Continuation of Vietnamese 604. Six class hours a week for one semester. Vietnamese 612 and 412K may not both be counted; Vietnamese 612 and 412L may not both be counted. Prerequisite: Vietnamese 604 with a grade of at least C.

#### **VTN 412K. Second-Year Vietnamese I.**

Not open to native speakers of Vietnamese. Four class hours a week for one semester. Vietnamese 612 and 412K may not both be counted. Prerequisite: Vietnamese 507 with a grade of at least C.

#### **VTN 412L. Second-Year Vietnamese II.**

Not open to native speakers of Vietnamese. Four class hours a week for one semester. Vietnamese 612 and 412L may not both be counted. Prerequisite: Vietnamese 412K with a grade of at least C.

### **Upper-Division Courses**

#### **VTN 320K. Readings in Modern Vietnamese I.**

Readings in expository prose: selections from journals, newspapers, and other sources. Three lecture hours a week for one semester. Prerequisite: Vietnamese 604 or 412L with a grade of at least C.



### **VTN 320L. Readings in Modern Vietnamese II.**

Readings in modern fiction, poetry, and drama. Three lecture hours a week for one semester. Prerequisite: Vietnamese 320K with a grade of at least C.

### **VTN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Vietnamese.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Asian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **VTN 360. Conference Course in Vietnamese Language and Literature.**

Supervised individual study in Vietnamese language and literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor on form obtained from the undergraduate adviser.

## **Department of Classics**

No knowledge of Greek or Latin is required for courses in classical civilization or in ancient history and classical civilization. These courses may not be counted toward fulfillment of any foreign language requirement.

Unless otherwise indicated, all Greek courses are ancient Greek (including New Testament Greek). Students beginning ancient Greek normally follow the regular sequence: Greek 506, 507, 311, and 312K. An intensive sequence is also available: Greek 804 and 412, normally followed by Greek 311.

Students beginning Latin normally follow the regular sequence: Latin 506, 507, 311, and 312K or 316. Students may instead follow an accelerated sequence; information about this sequence is available from the undergraduate departmental adviser. Students with high school or transfer credit in Latin usually begin University coursework at a higher level. To ensure proper placement, students should consult the undergraduate adviser for the Department of Classics before registering.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Ancient History and Classical Civilization: AHC**

### **Lower-Division Courses**

#### **AHC 310. Introductory Surveys in Premodern History.**

Introductory survey of premodern history with emphasis on regions outside of the ancient Mediterranean world. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### **AHC 319. Introductory Surveys in Roman and Greek History.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: The Ancient Mediterranean World.** Same as Classical Civilization 319D and History 319D. Survey of the ancient Mediterranean from ca. 3000 BC to AD 476. Focus on the development of ideas and institutions in the Greek and Roman worlds and on the active cultural exchange among the diverse civilizations of the broader region that shaped Greek and Roman history and cultural identity.

#### **AHC 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Ancient History.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the ancient history and classical civilization program. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **AHC 325. Topics in Ancient History.**

Topics in the history of the Greek and Roman empires and the surrounding area. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The History of Rome: The Republic.** Same as History 321M. A survey of Roman history from the founding of Rome to the death of Julius Caesar. Prerequisite: Upper-division standing.

**Topic 2: The History of Rome: The Empire.** Same as History 321. A survey of the Roman world from Augustus to Constantine the Great. Prerequisite: Upper-division standing.

**Topic 3: Rome and Jerusalem.** Same as History 321G, Jewish Studies 365 (Topic 7: Rome and Jerusalem), Middle Eastern Studies 342 (Topic 21: Rome and Jerusalem), and Religious Studies 365 (Topic 1: Rome and Jerusalem). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Ancient History and Classical Civilization 325 (Topic 3), Classical Civilization 348 (Topic: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7), Middle Eastern Studies 320 (Topic 2: Rome and Jerusalem), 342 (Topic 21), Religious Studies 365 (Topic 1), Urban Studies 353 (Topic: Rome and Jerusalem). Prerequisite: Upper-division standing.

**Topic 4: History of Greece to the End of the Peloponnesian War.** Same as Classical Civilization 354C and History 354C. Survey of Greek history from the emergence of the city-states through the end of the Peloponnesian War (ca. 700 to 404 BC). Prerequisite: Upper-division standing.

**Topic 5: History of Greece to 146 BC.** Same as Classical Civilization 354D and History 354D. Survey of Greek history from the end of the Peloponnesian War to the defeat of Greece by Rome (404 to 146 BC). Prerequisite: Upper-division standing.

**Topic 6: The Hellenistic Age: Alexander to Actium.** Same as Classical Civilization 351D and History 351D. History of Asia, Egypt,

and the Mediterranean world from Alexander's expedition to Asia to Rome's defeat of the last of the Hellenistic monarchs at Actium (ca. 334 to 31 BC). Prerequisite: Upper-division standing.

### **AHC 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Ancient History.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the ancient history and classical civilization program. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **AHC 330. Topics in Premodern History.**

Topics in premodern history with emphasis on regions outside of the ancient Mediterranean world. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **AHC 378. Undergraduate Seminar in Ancient History.**

Lectures, discussion, reading, and research on selected topics in Greek and Roman history. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and a major in ancient history and classical civilization, classical civilization, Greek, or Latin. Additional prerequisites vary with the topic and are given in the Course Schedule.

### **AHC 679H. Honors Tutorial Course.**

Supervised conference course for honors candidates in ancient history and classical civilization. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Ancient History and Classical Civilization Honors Program; for 679HB, Ancient History and Classical Civilization 679HA.

## **Classical Civilization: C C**

### **Lower-Division Courses**

#### **C C 301. Introduction to Ancient Greece.**

Greatness of Greece as reflected in Greek history, literature, philosophy, art, religion, and politics. No knowledge of Greek is required. Three class hours a week for one semester. Classical Civilization 301 and 342 may not both be counted.

#### **C C 302. Introduction to Ancient Rome.**

Survey of the highlights and the influence of Roman civilization. No knowledge of Latin is required. Three class hours a week for one semester. Classical Civilization 302 and 347 may not both be counted.

#### **C C 303. Introduction to Classical Mythology.**

Survey of major Greek and Roman myths and their influence on literature, art, and music. Three class hours a week for one semester. Classical Civilization 303 and 352 may not both be counted.

#### **C C 304C. Topics in the Ancient World.**

An introductory survey of the highlights of Greek and Roman civilization and early Christianity. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical

Civilization 304C and 348 may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

#### **Topic 1: Introduction to Greek Private Life.**

#### **Topic 2: Paganism to Christianity: An Introduction.**

**Topic 3: Introduction to Ancient Egypt.** A survey of the language, culture, and history of Egypt from the prehistorical period (13,000 BC) to the New Kingdom (1069 BC). Classical Civilization 304C (Topic 3) and 348 (Topic 11: Ancient Egypt) may not both be counted.

### **C C 305. Topics in Roman Civilization.**

A survey of the social life and customs of ancient Rome and Pompeii. No knowledge of Latin is required. Three class hours a week for one semester. Classical Civilization 305 and 335 may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

#### **Topic 1: Introduction to Caesar and Augustus.**

#### **Topic 2: Introduction to Roman Private Life.**

### **C C 306. Introduction to the Latin and Greek Element in English.**

The systematic study of the Latin and Greek elements in the English vocabulary with a view to increasing the student's facility and authority in English. No knowledge of Greek or Latin is required. Three class hours a week for one semester. Classical Civilization 306 and 336 may not both be counted.

### **C C 306M. Introduction to Medical and Scientific Terminology.**

A systematic study of medical and scientific terminology based on Greek and Latin roots. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical Civilization 306M and 336M may not both be counted.

### **C C 307C. Introduction to Greek Archaeology.**

A survey of the artifacts, monuments, and sites of ancient Greece, and their value for documenting Greek religious, social, and cultural history. No knowledge of Greek is required. Three lecture hours a week for one semester. Classical Civilization 307C and 307K (Topic 1: Greek Archaeology Survey) may not both be counted.

### **C C 307D. Introduction to Roman Archaeology.**

A survey of the artifacts, monuments, and sites of ancient Rome, and their value for documenting Roman religious, social, and cultural history. No knowledge of Latin is required. Three lecture hours a week for one semester.

### **C C 307K. Topics in Archaeology.**

Survey of archaeological discoveries about ancient Greece or Rome in their historical and cultural context; emphasis on the major sites and monuments of architecture and art. No knowledge of Greek or Latin is required. Three class hours a week for one semester. Classical Civilization 307K and 340 may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

### **C C 317. Classical Archaeology: Methods and Approaches.**

An overview of the history of classical archaeology and its methods and approaches. Focuses on case studies of major sites and their excavation and interpretation. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical

Civilization 302K and 317 may not both be counted. Prerequisite: One of the following courses: Ancient History and Classical Civilization 319 (Topic 1: The Ancient Mediterranean World), Art History 302, Classical Civilization 301, 302, 307C, 307D, 318, 319D, History 319D, Religious Studies 318.

### **C C 318. The Rise of Christianity.**

Same as Religious Studies 318. Introduction to the origins and development of Christianity. Three lecture hours a week for one semester.

### **C C 319D. The Ancient Mediterranean World.**

Same as Ancient History and Classical Civilization 319 (Topic 1: The Ancient Mediterranean World) and History 319D. Survey of the ancient Mediterranean from ca. 3000 BC to AD 476. Focus on the development of ideas and institutions in the Greek and Roman worlds and on the active cultural exchange among the diverse civilizations of the broader region that shaped Greek and Roman history and cultural identity. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

### **C C 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Classical Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **C C 322. Classical Literature in Translation.**

Survey of Greek and Latin philosophical, literary, and historical classics, in translation. No knowledge of Greek or Latin is required. Three class hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

#### **Topic 3: Wit and Humor in Antiquity.**

**Topic 4: Ancient Epic.** Classical Civilization 322 (Topic 4) and 322 (Topic: Epic Tradition: From Homer to Tennyson) may not both be counted.

### **C C 327. Parageography.**

Survey of the classical and medieval roots of speculative literature, especially those fantasies that involve the creation and presentation of imaginary places, lands, and worlds. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **C C 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Classical Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **C C 330K. Ancient Philosophy after Aristotle.**

Same as Philosophy 330K. Epicureans, Stoics, Skeptics, Plotinus and the Neoplatonist tradition. No knowledge of Greek is required. Three class hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

### **C C 336M. Medical and Scientific Terminology.**

A systematic study of medical and scientific terminology based on Greek and Latin roots. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical Civilization 306M and 336M may not both be counted. Prerequisite: Upper-division standing.

### **C C 340. Advanced Topics in Classical Archaeology.**

Detailed study of a single topic such as architecture, sculpture, or topography of sites. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester. Classical Civilization 307K and 340 may not both be counted unless the topics vary. Classical Civilization 340 and 375 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Greek Archaeology.** Study of the artifacts, monuments, and sites of classical Greece; and their value for documenting ancient Greek religious, social, and cultural history. Prerequisite: Upper-division standing.

**Topic 2: Roman Imperial Art.** Same as Art History 327N. Public art of the Roman Empire from Augustus to late antiquity, ca. 31 BC to AD 350.

**Topic 3: Greek Architecture.** The architecture of mainland Greece, Asia Minor, and Sicily from the Dark Ages to the end of the Hellenistic period (ca. 1000 to 30 BC), with emphasis on public buildings, both religious and secular. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 4: Roman Architecture.** Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 5: Hellenistic Art and Architecture.** Art of the Hellenistic period from the reign of Alexander the Great to the beginning of the Roman Empire, ca. 336 to 31 BC. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

### **C C 348. Topics in Ancient Civilization.**

The development and progress of ancient civilization, including history, philosophy, literature, and culture. No knowledge of Greek or Latin is required. Three lecture hours a week for one semester; additional hours may be required for some topics. Classical Civilization 304C and 348 may not both be counted unless the topics vary. Classical Civilization 348 and 375 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 4: History of Ancient Philosophy.** Same as Philosophy 329K. Development of Western philosophy from the pre-Socratics to the early Christian era; emphasis on Plato and Aristotle. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Classical Civilization 342 (Topic: History of Ancient Philosophy), 348 (Topic 4), Philosophy 329K. Prerequisite: Six semester hours of coursework in philosophy.



**Topic 5: Homosexuality in Antiquity.** Prerequisite: Upper-division standing.

**Topic 7: Women in Classical Antiquity.** Same as Women's and Gender Studies 345 (Topic 9: Women in Classical Antiquity).

**Topic 8: German and English: Historical Perspectives.** Same as Anthropology 320L (Topic 8: German and English: Historical Perspectives), Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives), and Linguistics 373 (Topic 8: German and English: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8), 320L (Topic 9: The German Language: Historical Perspectives), Classical Civilization 348 (Topic 8), 348 (Topic 9: The German Language: Historical Perspectives), German 369 (Topic 4: The German Language: Historical Perspectives), Germanic Civilization 327E (Topic 9), Linguistics 373 (Topic 8), 373 (Topic 9: The German Language: Historical Perspectives). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

**Topic 9: The German Language: Historical Perspectives.** Same as Anthropology 320L (Topic 9: The German Language: Historical Perspectives), German 369 (Topic 4: The German Language: Historical Perspectives), and Linguistics 373 (Topic 9: The German Language: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8: German and English: Historical Perspectives), 320L (Topic 9), Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), 348 (Topic 9), German 369 (Topic 4), Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives), Linguistics 373 (Topic 8: German and English: Historical Perspectives), 373 (Topic 9). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.

**Topic 10: Jesus in History and Tradition.** Same as Religious Studies 335. Critical issues, scholarly debates, and historical methods in studying the development of the Christian tradition regarding the figure of Jesus. Prerequisite: Upper-division standing.

**Topic 11: Ancient Egypt.** Discussion of Egypt's culture, language, and history from the prehistorical period (13,000 BC) to the New Kingdom (1069 BC). Classical Civilization 304C (Topic 3: Introduction to Ancient Egypt) and 348 (Topic 11) may not both be counted. Prerequisite: Upper-division standing.

### **C C 351D. The Hellenistic Age: Alexander to Actium.**

Same as Ancient History and Classical Civilization 325 (Topic 6: The Hellenistic Age: Alexander to Actium) and History 351D. History of Asia, Egypt, and the Mediterranean world from Alexander's expedition to Asia to Rome's defeat of the last of the Hellenistic monarchs at Actium (ca. 334 to 31 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

### **C C 352. Classical Mythology.**

Survey of major Greek and Roman myths and their influence on literature, art, and music. Three lecture hours a week for one semester. Classical Civilization 303 and 352 may not both be counted. Prerequisite: Upper-division standing.

### **C C 354C. History of Greece to the End of the Peloponnesian War.**

Same as Ancient History and Classical Civilization 325 (Topic 4: History of Greece to the End of the Peloponnesian War) and History 354C. Survey of Greek history from the emergence of the city-states through the end of the Peloponnesian War (ca. 700 to 404 BC). Two

lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

### **C C 354D. History of Greece to 146 BC.**

Same as Ancient History and Classical Civilization 325 (Topic 5: History of Greece to 146 BC) and History 354D. Survey of Greek history from the end of the Peloponnesian War to the defeat of Greece by Rome (404 to 146 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

### **C C 362. Conference Course in Classical Archaeology.**

Advanced archaeological instruction and research in classical archaeology. No knowledge of Greek is required. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **C C 363. Conference Course in Classical Civilization.**

Supervised work in various specialized aspects of classical civilization. No knowledge of Greek or Latin is required. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **C C 375. Seminar in Classical Studies.**

Restricted to students in the Department of Classics. Study of selected topics in classical studies. Some knowledge of Greek or Latin is expected. Three lecture hours a week for one semester. Classical Civilization 340 and 375 may not both be counted unless the topics vary. Classical Civilization 348 and 375 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic.

### **C C 679H. Honors Tutorial Course.**

Supervised conference course for honors candidates in classics. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Classics Honors Program; for 679HB, Classical Civilization 679HA.

## **Greek: GK**

### **Lower-Division Courses**

#### **GK 601C. Beginning Greek.**

Studies the fundamentals of grammar and reading in ancient Greek. Six lecture hours a week for one semester. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q.

#### **GK 502. First-Year Modern Greek I.**

Introduction to grammar and reading. Five lecture hours a week for one semester. Greek 502 and 602C may not both be counted.

#### **GK 602C. Beginning Modern Greek.**

Six lecture hours a week for one semester. Greek 502 and 602C may not both be counted. Greek 602C and 503 may not both be counted.

#### **GK 503. First-Year Modern Greek II.**

Continuation of Greek 502. Five lecture hours a week for one semester. Greek 602C and 503 may not both be counted. Prerequisite: Greek 502 with a grade of at least C.



### **GK 804. Intensive Beginning Greek.**

An accelerated course for highly motivated students that combines the material covered in Greek 506 with that covered in the first part of Greek 507. Offered in the summer session as part of the Intensive Greek Program. The Intensive Greek Program meets for five hours each weekday during the summer session. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q. The student must complete both Greek 804 and 412 in order to earn credit for either; the same grade will be awarded for both courses. Prerequisite: Concurrent enrollment in Greek 412. Students who enroll in 804 must take Greek 412 in the same summer session.

### **GK 506 (TCCN: GREE 1511). First-Year Greek I.**

Studies the fundamentals of grammar and reading in ancient Greek. Five lecture hours a week for one semester. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q.

### **GK 507 (TCCN: GREE 1512). First-Year Greek II.**

Continuation of Greek 506. Five lecture hours a week for one semester. Only one of the following may be counted: Greek 601C; 804; 506 and 507; 606Q. Greek 507 and 412 may not both be counted. Prerequisite: Greek 506 with a grade of at least C.

### **GK 309K. Conference Course.**

Supervised individual instruction in second-year ancient or modern Greek reading. Conference course. May be repeated for credit. Prerequisite: Consent of instructor.

### **GK 310. Second-Year Modern Greek I.**

Culture, language, and literature of present-day Greece. Three lecture hours a week for one semester. Greek 310 and 610C may not both be counted. Prerequisite: Greek 602C or 503 with a grade of at least C.

### **GK 610C. Intermediate Modern Greek.**

Continuation of Greek 602C. Six lecture hours a week for one semester. Greek 310 and 610C may not both be counted. Greek 610C and 310K may not both be counted. Prerequisite: Greek 602C or 503 with a grade of at least C.

### **GK 310K. Second-Year Modern Greek II.**

Continuation of Greek 310. Three lecture hours a week for one semester. Greek 610C and 310K may not both be counted. Prerequisite: Greek 310 with a grade of at least C.

### **GK 311 (TCCN: GREE 2311). Intermediate Greek I.**

Continuation of Greek 601C or 507. Introductory readings from classical authors such as Lysias, Plato, and Xenophon. Includes grammar review. Three lecture hours a week for one semester. Prerequisite: Greek 601C or 507 with a grade of at least C, or Greek 804 and 412 with a grade of at least C in each.

### **GK 412. Intensive Greek.**

An accelerated course for highly motivated students. Completion of this course is equivalent to completion of Greek 506 and 507. Students who enroll in 412 must take Greek 804 in the same summer session. A grade of A may allow the student to advance to Greek 324 with consent of the Greek 324 instructor. The Intensive Greek Program meets for five hours each weekday during the summer session. Greek 507 and 412 may not both be counted. Prerequisite: Concurrent enrollment in Greek 804.

### **GK 312K. Intermediate Greek II.**

Continuation of Greek 311. Selected readings from classical and biblical authors. Three lecture hours a week for one semester. Greek 312K and 312L may not both be counted. Prerequisite: Greek 311 with a grade of at least C.

### **GK 312L. Intermediate Greek II: Biblical Greek.**

Continuation of Greek 311. A parallel to Greek 312K with a focus on biblical Greek. Three class hours a week for one semester. Greek 312K and 312L may not both be counted. Prerequisite: Greek 311 with a grade of at least C.

### **GK 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Greek.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **GK 324. Advanced Greek.**

Reading and analysis of classical authors such as Homer, Herodotus, Euripides, and Plato. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Greek 312K or 312L (or 322) with a grade of at least C; or Greek 412 with a grade of at least A-, and consent of the undergraduate adviser.

**Topic 1: Euripides.**

**Topic 2: Herodotus.**

**Topic 3: Homer's Iliad.**

**Topic 4: Plato.**

#### **GK 326. Advanced Greek Grammar and Composition.**

Study of syntax, style, and principles of written composition. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Greek 324.

#### **GK 328. Advanced Biblical Greek.**

Reading and analysis of selections from the New Testament, the Septuagint, and related writings. Three lecture hours a week for one semester. Greek 328 and 362 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Greek 312K or 312L (or 322) with a grade of at least C; or Greek 412 with a grade of at least A-, and consent of the undergraduate adviser.

**Topic 1: Pauline Epistles.**

**Topic 2: The Gospel of John.**

#### **GK 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Greek.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **GK 362. Seminar in Biblical Greek.**

Critical study of biblical texts and related writings. Three lecture hours a week for one semester. Greek 328 and 362 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Greek 324 or 328.

### **GK 365. Seminar in Greek.**

Critical study of authors such as Thucydides, Demosthenes, and Aeschylus. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Greek 324 or 328.

- Topic 1: Aeschylus.**
- Topic 2: Sophocles.**
- Topic 3: Thucydides.**
- Topic 4: Aristophanes.**

### **GK 370. Advanced Conference Course.**

Supervised reading. Conference course. May be repeated for credit. Prerequisite: Greek 310K or 324, and consent of instructor.

### **GK 679H. Honors Tutorial Course.**

Supervised conference course for honors candidates in Greek. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the honors program in Greek; for 679HB, Greek 679HA.

## **Latin: LAT**

### **Lower-Division Courses**

#### **LAT 601C. Beginning Latin.**

Fundamentals of grammar and reading. Six lecture hours a week for one semester. Only one of the following may be counted: Latin 601C; 506 and 507; 506Q; 508.

#### **LAT 506 (TCCN: LATI 1511). First-Year Latin I.**

Fundamentals of grammar and reading. Five lecture hours a week for one semester. Only one of the following may be counted: Latin 601C; 506 and 507; 506Q; 508.

#### **LAT 507 (TCCN: LATI 1512). First-Year Latin II.**

Continuation of Latin 506. Five lecture hours a week for one semester. Only one of the following may be counted: Latin 601C; 506 and 507; 506Q; 508. Prerequisite: Latin 506 with a grade of at least C.

#### **LAT 309K. Conference Course.**

Supervised individual instruction in second-year Latin reading. Conference course. May be repeated for credit. Prerequisite: Consent of instructor.

#### **LAT 311 (TCCN: LATI 2311). Intermediate Latin I.**

Continuation of Latin 601C and 507. Introduction to reading classical authors in their cultural context. Includes grammar review. Three lecture hours a week for one semester. Latin 311 and 511K may not both be counted. Prerequisite: Latin 601C or 507 (or 506Q or 508) with a grade of at least C.

#### **LAT 511K. Accelerated Intermediate Latin.**

Designed primarily for students of high academic ability and motivation. Comparable to Latin 311 and 312K together. Five lecture hours a week for one semester. Only one of the following may be

counted: Latin 511K, 312K, 312M, 316. Latin 311 and 511K may not both be counted. Prerequisite: Latin 601C or 507 (or 506Q or 508) with a grade of at least A-.

#### **LAT 312K. Intermediate Latin II.**

Continuation of Latin 311. Selected readings from classical authors. Three lecture hours a week for one semester. Only one of the following may be counted: Latin 511K, 312K, 312M, 316. Prerequisite: Latin 311 with a grade of at least C.

#### **LAT 316. Intermediate Latin II: Poetry.**

Continuation of Latin 311. Selected readings from classical and medieval poets. Three lecture hours a week for one semester. Only one of the following may be counted: Latin 511K, 312K, 312M, 316. Prerequisite: Latin 311 with a grade of at least C.

#### **LAT 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Latin.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **LAT 322. Advanced Latin I.**

Reading and analysis of selected classical authors. Three lecture hours a week for one semester. Prerequisite: Latin 511K, 312K, or 316 (or 312M) with a grade of at least C.

#### **LAT 323. Advanced Latin II.**

Reading and interpretation of authors such as Caesar, Catullus, Cicero, and Ovid. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Latin 322 with a grade of at least C.

#### **LAT 324. Advanced Latin Grammar and Composition.**

Study of syntax, style, and principles of written composition. Three lecture hours a week for one semester. Required of all Latin majors and students seeking a secondary school teaching certificate with Latin as a teaching field. Prerequisite: Latin 322 with a grade of at least C, or consent of the undergraduate adviser.

#### **LAT 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Latin.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Classics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **LAT 365. Seminar in Latin.**

Critical study of authors such as Horace, Livy, Lucretius, and Tacitus. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Latin 323 with a grade of at least C.

- Topic 1: Horace.**

**Topic 2: Lucretius.**

**Topic 4: Tacitus.**

### **LAT 370. Advanced Conference Course.**

Supervised reading. Conference course. May be repeated for credit. Prerequisite: Consent of instructor.

### **LAT 679H. Honors Tutorial Course.**

Supervised conference course for honors candidates in Latin. Three conference hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Latin Honors Program; for 679HB, Latin 679HA.

## **Cognitive Science**

### **Cognitive Science: CGS**

#### **Upper-Division Courses**

##### **CGS 360. Cognitive Science: The Study of Mind.**

An introduction to the study of mind known as cognitive science, focusing on key areas such as vision and language, cognition and problem solving, artificial intelligence. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Introduction to Cognitive Science.** Same as Linguistics 373 (Topic 7: Introduction to Cognitive Science) and Philosophy 365 (Topic 2: Introduction to Cognitive Science).

## **Comparative Literature**

### **Comparative Literature: C L**

#### **Lower-Division Courses**

##### **C L 301. Introduction to Comparative Literature.**

Reading and interpretation of literary texts in translation drawn from cultures around the world, focusing on methods of criticism and analysis. Three lecture hours a week for one semester.

##### **C L 305. Topics in Comparative Literature.**

Study of masterpieces of world literature; of different literary genres; and the relationship between literature and other disciplines such as psychology, philosophy, and film. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **C L 315. Masterworks of World Literature.**

Introduction to masterpieces of the world's literary traditions, emphasizing historical, generic, and thematic connections. Three lecture hours a week for one semester. Some sections require an additional discussion hour a week. Only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Prerequisite: Completion of at least thirty semester hours of coursework, including English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A; and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.

##### **C L 318Q. Supervised Research.**

Individual instruction.

### **Upper-Division Courses**

##### **C L 320. Conference Course in Comparative Literature.**

Independent study of literary projects under supervision of professors in comparative literature. Conference course. Prerequisite: Six semester hours of upper-division coursework in literature, of which three hours must be in a classical or foreign language.

##### **C L 323. Topics in Comparative Literature.**

Study of masterpieces of world literature; of different literary genres; of the relationship between literature and other disciplines, such as psychology, philosophy, and film; and of special topics of a comparative nature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Autobiography: A Modern Literary Species.** Same as African and African Diaspora Studies 374 (Topic 25: Autobiography: A Modern Literary Species) and Middle Eastern Studies 342 (Topic 20: Autobiography: A Modern Literary Species). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 25), Comparative Literature 323 (Topic 3), English 379N (Topic 5: Autobiography: A Modern Literary Species), Middle Eastern Studies 322K (Topic 25: Autobiography: A Modern Literary Species), 342 (Topic 20), Women's and Gender Studies 340 (Topic: Autobiography: A Modern Literary Species). Prerequisite: Upper-division standing.

**Topic 4: Self-Revelation in Women's Writing.** Same as African and African Diaspora Studies 374 (Topic 26: Self-Revelation in Women's Writing), Middle Eastern Studies 342 (Topic 19: Self-Revelation in Women's Writing), and Women's and Gender Studies 340 (Topic 14: Self-Revelation in Women's Writing). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 26), Comparative Literature 323 (Topic 4), English 376L (Topic 9: Self-Revelation in Women's Writing), Middle Eastern Studies 322K (Topic 26: Self-Revelation in Women's Writing), 342 (Topic 19), Persian 361 (Topic: Self-Revelation in Women's Writing). Prerequisite: Upper-division standing.

**Topic 6: Caribbean Literature.** Same as English 360L (Topic 2: Caribbean Literature) and African and African Diaspora Studies 374F (Topic 7: Caribbean Literature). Only one of the following may be counted: African and African Diaspora Studies 374F (Topic 4), Comparative Literature 323 (Topic 6), English 379N (Topic: Caribbean Literature), 360L (Topic 2). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

##### **C L 324. The History of Fantastic Literature.**

Open to all University students. The history of fantastic and fantasy literature.

##### **C L 358Q. Supervised Research.**

Individual instruction. Prerequisite: Upper-division standing.

# Thomas Jefferson Center for the Study of Core Texts and Ideas

## Core Texts and Ideas: CTI

### Lower-Division Courses

#### CTI 301. Ancient Philosophy and Literature.

Studies classical philosophy and literature, primarily from ancient Greece, to explore fundamental questions about human nature, justice, ethics, and humanity's place in the cosmos. Readings include one or more masterpieces of epic or tragedy and one or more dialogues of Plato. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 301 and Western Civilization 301 may not both be counted.

#### CTI 302. Classics of Social and Political Thought.

Explores the origins of social scientific thought in the history of political philosophy and traces the development of one or more of the social sciences in modern times. Focuses on fundamental ideas about human nature, civil society, and politics, explored through reading such authors as Aristotle, Aquinas, Locke, Rousseau, Marx, Weber, Durkheim, and Freud. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

#### CTI 303. Competing Visions of the Good Life.

Same as Government 314 (Topic 6: Competing Visions of the Good Life). Introduces the great rival conceptions of the moral basis and goals of political life as elaborated by revolutionary thinkers throughout the history of political philosophy, including Aristotle, Aquinas, Locke, late modern critics of the Enlightenment, and others. Three lecture hours a week for one semester. Only one of the following may be counted: Core Texts and Ideas 303, Government 314 (Topic 6), Western Civilization 303 (Topic: Competing Visions of the Good Life).

#### CTI 304. World Religions: Traditions and Texts.

A study of basic religious texts, including both the Hebrew Bible and New Testament, examined from various perspectives (including comparative, historical, philosophical, and literary), with emphasis on the fundamental questions and ideas raised in those texts. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 304 and Western Civilization 303 may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

**Topic 1: The Bible and Its Interpreters.** Seeks to develop a wide-ranging familiarity with the Jewish and Christian Bibles and with the dominant modes of ancient, medieval, and early modern biblical interpretation. Readings include an extensive range of primary sources, including both the Scriptures themselves and some of their most influential exegetes.

#### CTI 310. Topics in Core Texts and Ideas.

Introduction to fundamental texts and questions that have helped shape the world. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 310 and Western Civilization 303 may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

#### CTI 111. Core Texts Seminar.

Close reading and discussion of primary sources, normally pursued in conjunction with another three-hour course in a field of study such as

history or government. One discussion hour a week for one semester. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### CTI 320. The Classical Quest for Justice.

Same as Government 351C. Introduces students to classical political thought through a study of seminal works of antiquity, focusing on those of Plato and Aristotle. Three lecture hours a week for one semester. Only one of the following may be counted: Core Texts and Ideas 320, 335 (Topic: Classical Quest for Justice), Government 335M (Topic: Classical Quest for Justice), 351C, Western Civilization 320 (Topic: Classical Quest for Justice). Prerequisite: Completion of at least thirty semester hours of coursework.

#### CTI 321. The Theoretical Foundations of Modern Politics.

Same as Government 351D. Examines competing foundations of the ongoing development of political and social modernity. Examines a selection of major authors from Machiavelli to Nietzsche. Three lecture hours a week for one semester. Only one of the following may be counted: Core Texts and Ideas 321, 335 (Topic: The Theoretical Foundations of Modern Politics), Government 335M (Topic: The Theoretical Foundations of Modern Politics), 351D Western Civilization 320 (Topic: The Theoretical Foundations of Modern Politics). Prerequisite: Completion of at least thirty semester hours of coursework.

#### CTI 322. Critics of Modern Liberalism.

Same as Government 351G. Selected critics of the philosophy of the Enlightenment from both the Left and the Right, and from the time of Rousseau to the present. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 322, Government 335M (Topic: Liberalism and its Critics), 351G. Prerequisite: Upper-division standing.

#### CTI 323. Might and Right among Nations.

Same as Government 351J. Major alternative approaches to the question of the moral character of international relations, as elaborated by some of the greatest political thinkers. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 323, 335 (Topic: Might and Right among Nations), Government 335M (Topic: Might and Right among Nations), 351J, Western Civilization 320 (Topic: Might and Right among Nations). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

#### CTI 324. Politics and Literature.

Explores the "old battle between the poets and philosophers," in which the two sides battle for recognition as the deepest source of wisdom about politics and ethics. Includes readings from great works of political philosophy and literature. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

#### CTI 325. Morality and Politics.

Same as Government 351L. Interdisciplinary readings from major works exploring issues of ethics and leadership. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 325, Government 335M (Topic: Morality and Politics), 351L. Prerequisite: Upper-division standing.



### **CTI 326. Core Texts on American Democracy.**

A close study of major texts and documents that shed light on fundamental issues in American democracy such as rights, equality, individual liberty, and the proper ends and limits of government. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 326 and Western Civilization 320 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **CTI 335. Core Texts in Philosophy.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 335 and Western Civilization 320 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **CTI 345. Core Texts in Literature.**

Major works of literature from one or more cultures, studied with special attention to questions of universal human concern. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 345 and Western Civilization 320 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **CTI 350. Masterworks of World Drama.**

Studies major tragedies, comedies, and historical plays from various epochs, including at least one of Shakespeare's plays. Explores themes related to ethics, politics, and human nature, as well as the craft of the playwright. Students attend and discuss at least one play performance. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

### **CTI 351. The Idea of the Beautiful.**

Classical philosophical discussions of the idea of the beautiful (or noble or sublime), illustrated through selected works of art, drama, and literature. Explores the human perception of and response to beauty and its relation to such ideas as happiness and the promise of happiness, moral nobility or selflessness, and the divine. Philosophical works are studied in connection with examples drawn from the arts and are considered in their historical contexts. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

### **CTI 365. Classics of Social Scientific Thought.**

Studies a selection of foundational modern classics in economics, psychology, sociology, political science, and anthropology, drawn mainly from the nineteenth and twentieth centuries. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

### **CTI 366. Topics in Economic and Social Thought.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **CTI 370. Core Texts of Science and Mathematics.**

Studies works of major scientists, mathematicians, and philosophers, and explores the fundamental ideas from one discipline or time period and the nature and grounds of human knowledge. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 370 and Western Civilization 320 may not both

be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **CTI 371. Einstein in the Age of Conflict.**

Same as History 350L (Topic 64: Einstein in the Age of Conflict). Following the life and work of Albert Einstein, course examines the rise of the theories of relativity and quantum mechanics upon the stage of international political upheaval. Three lecture hours a week for one semester. Only one of the following may be counted: Core Texts and Ideas 370 (Topic: Einstein in the Age of Conflicts), 371, History 350L (Topic 64). Prerequisite: Upper-division standing.

### **CTI 372. Darwin and the Politics of Evolution.**

Same as Government 353D. A careful reading of Darwin's influential *Origin of the Species by Means of Natural Selection*, together with an examination of the religious, political, and scientific controversies the book has inspired from its first publication to the present day. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 370 (Topic: The Politics of Evolution), 372, Government 335M (Topic: The Politics of Evolution), 353D. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **CTI 375. Topics in Core Texts and Ideas.**

Study of classic texts, connected historically or thematically. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Core Texts and Ideas 375 and Western Civilization 320 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **CTI 379. Conference Course.**

Intensive tutorial study of selected major texts. Individual instruction. May be repeated for credit. Prerequisite: Upper-division standing and consent of the director of the Jefferson Center and instructor.

## **Américo Paredes Center for Cultural Studies**

### **Cultural Studies: CLS**

#### **Lower-Division Courses**

#### **CLS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Folklore and Cultural Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in cultural studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **Upper-Division Courses**

#### **CLS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Folklore and Cultural Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in cultural studies. University credit is awarded for work

in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **CLS 340. Conference Course in Folklore and Cultural Studies.**

Supervised reading and research on a folklore or cultural studies subject, including the writing of an original paper. Conference course. Prerequisite: Upper-division standing and a concentration in cultural studies.

## **Department of Economics**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Economics: ECO**

#### **Lower-Division Courses**

##### **ECO 301. Introduction to Economics.**

Explores how economists describe and measure the economy in the aggregate and in specific markets, such as the labor market, the housing market, financial markets, and international trade. Studies concepts for measurement and data, as well as methods, approaches, and technologies used in social and behavioral science. Three lecture hours a week for one semester. May not be counted toward a major in economics.

##### **ECO 304K (TCCN: ECON 2302). Introduction to Microeconomics.**

Analysis of the economic behavior of individual consumers, firms, and workers; special attention to the role of markets. Three lecture hours a week for one semester. Some sections require an additional discussion hour a week.

##### **ECO 304L (TCCN: ECON 2301). Introduction to Macroeconomics.**

Analysis of the economy as a whole (its organization and the basic forces influencing its growth and development); money and banking, national income, public finance, and international linkages. Three lecture hours a week for one semester. Some sections require an additional discussion hour a week. Prerequisite: Economics 304K with a grade of at least C-.

##### **ECO 305. Introductory Topics in Economics.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

##### **ECO 318Q. Supervised Research.**

Individual instruction. May be repeated once for credit when the research topics vary. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

##### **ECO 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Economics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study

Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Economics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **Upper-Division Courses**

##### **ECO 420K. Microeconomic Theory.**

A survey of neoclassical and contemporary theories of the principal determinants of prices and of the role of prices in economic organization. Four lecture hours a week for one semester. Required of students majoring in economics. Students may not attempt Economics 420K more than twice. Prerequisite: Economics 304K and 304L with a grade of at least C- in each; and Mathematics 408C and 408D, or 408K and 408L, or 408N and 408S, with a grade of at least C- in each.

##### **ECO 320L. Macroeconomic Theory.**

Theory of the determination of national income, employment, and the price level, with policy implications. Three lecture hours a week for one semester. Required of students majoring in economics. Prerequisite: Economics 420K with a grade of at least C-.

##### **ECO 321. Public Economics.**

Study of appropriate allocations of economic activity between government (federal, state, and local) and the private sector. The workings of social security, welfare, education, pollution control, deregulation, taxation; and proposals for reform. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

##### **ECO 322. Money and Banking.**

The role of money and depository institutions in the economy; introduction to financial and monetary theory and policy. Three lecture hours a week for one semester. Only one of the following may be counted: Economics 322, Finance 354, 354H. Prerequisite: Economics 420K and 320L with a grade of at least C- in each.

##### **ECO 323T. Studies in Economic History.**

Study of economic development, emphasizing more recent periods; causal factors, emerging problems, and major policy issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

**Topic 1: Economic History of the United States.** Economic history of the United States from colonial times to the present. Includes some aspects of labor history, industrial organization, financial history, and socioeconomic perspectives.

**Topic 2: World Economic History.** Economic history of the world from the Industrial Revolution to the present, with emphasis on technology as the engine of change.

##### **ECO 324. Introduction to Labor Economics.**

Study of labor in industrial societies, with emphasis on principles, institutions, and policies for understanding labor and personnel problems. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

##### **ECO 327. Comparative Economic Systems.**

Theories of and practices in the principal types of economic systems. Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

### **ECO 328. Industrial Organization.**

The organization of industries and markets: competition, monopoly, and oligopoly; antitrust policy and its alternatives. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 329. Economic Statistics.**

Methods of statistical analysis and interpretation of quantitative data in the field of economics. Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C- in each; and Mathematics 408C and 408D, or 408K and 408L, or 408N and 408S, with a grade of at least C- in each.

### **ECO 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Economics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Economics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **ECO 330T. Topics in Economics.**

Open to nonmajors. Topics may include economic theory, applications, and policy. Three lecture hours a week for one semester. Economics 330T and 350K may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **ECO 333K. Development Economics.**

Introduction to theories of economic development; discussion of leading issues. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 334K. Urban Economics.**

Same as Urban Studies 351 (Topic 2: Urban Economics). Economic analysis of urban areas; emphasis on the nature of current urban problems--slums, transportation, finance--and an evaluation of current policy. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 334L. Regional Economics.**

Same as Urban Studies 351 (Topic 3: Regional Economics). Spatial aspects of economics, including concepts, theories, and policy applications. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 339K. International Trade and Investment.**

Topics addressed include patterns and theories in the international trade of goods and services between Organisation for Economic Co-operation and Development (OECD) member countries, and between OECD countries and emerging markets; questions facing firms of where to locate production facilities; implications of international trade for per capita income, growth, and inequality. Three lecture hours a week for one semester. Economics 339K and International Business 350 may not both be counted. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 339L. International Finance.**

Exchange rates and foreign exchange markets; reasons for financial globalization; open-economy macro; exchange rate regimes (fixed and

floating exchange rates, currency boards, and currency areas such the eurozone); central bank accumulation of foreign exchange reserves; and sovereign debt crises and currency crashes. Reasons for different exchange rate arrangements and other policies are also explored. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 320L with a grade of at least C- in each.

### **ECO 341K. Introduction to Econometrics.**

Introduces the student to standard regression procedures of parameter estimation and hypothesis testing in economics. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.

### **ECO 346K. Russian Economic Development since 1917.**

The growth of the planned economy in industry, agriculture, and labor. Three lecture hours a week for one semester. Economics 346K and Russian, East European, and Eurasian Studies 335 (Topic 13: Russian Economic Development since 1917) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

### **ECO 350K. Advanced Topics in Economics.**

Designed primarily for economics majors. Topics may include in-depth analysis of problems in economic theory, applications, and economic policy. Three lecture hours a week for one semester. Economics 330T and 350K may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-. Additional prerequisites may vary with the topic and are given in the Course Schedule.

**Topic 4: Advanced Econometrics.** Theory of the linear regression model used widely in economic applications, including model specification, least squares and maximum likelihood estimation, hypothesis testing, multicollinearity, dummy variables, heteroskedasticity, and discrete choice models. Additional prerequisite: Economics 341K with a grade of at least C-.

**Topic 6: Advanced Microeconomic Theory.** Modern theory of the consumer and the firm. Topics include an analysis of consumer choice and demand functions, the theory of supply, cost and profit functions, duality theory, consumer surplus, choice under uncertainty, and partial equilibrium analysis. Emphasis on both economic principles and quantitative methods, especially static and dynamic optimization models. Additional prerequisite: Economics 329 with a grade of at least C-.

**Topic 7: Applied Economic Analysis.** Major issues in applied economics, including relevant theoretical and empirical models. Additional prerequisite: Economics 341K with a grade of at least a C-; Mathematics 408D or 408M; and Mathematics 340L or 341.

### **ECO 351K. Current Issues in Business Economics.**

Newly emerging problems in business and the approaches used for structuring, analyzing, and treating them. Three lecture hours a week for one semester. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 351L. Business Trends and the Operational Environment in the United States Economy.**

The technological basis of the United States economy; conditions, such as regulations, that define the macroenvironment. Three lecture hours a week for one semester. Prerequisite: Economics 420K, 320L, and 329 with a grade of at least C- in each.

**ECO 351M. Managerial Economics.**

The use of economic analysis optimizing techniques as tools for improving managerial decision making in business. Three lecture hours a week for one semester. Prerequisite: Economics 420K, and Economics 329 or Mathematics 362K, with a grade of at least C- in each.

**ECO 354K. Introductory Game Theory.**

Introduction to the formal study of interdependent decision making. Applications of game theory include pricing and advertising strategies, labor-management bargaining, and tariff negotiations. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.

**ECO 355. Development Problems and Policies in Latin America.**

Same as Latin American Studies 355 (Topic 1: Development Problems and Policies in Latin America) and Urban Studies 351 (Topic 1: Development Problems and Policies in Latin America). Description of the Latin American economy; business and market organization; problem of growth (involving credit, public finance, trade, investment aspects). Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

**ECO 357K. Marxist Economics.**

An introduction to the Marxian economic theory of capitalism through the study of Karl Marx's Capital, volume I, and of its contemporary relevance. Three lecture hours a week for one semester. Economics 357K and Russian, East European, and Eurasian Studies 335 (Topic 1: Marxist Economics) may not both be counted. Prerequisite: Upper-division standing.

**ECO 357L. Political Economy of International Crises.**

Examines several dimensions of the ongoing crises in the world economic order and the interrelationships among them. Problem areas covered are neoliberalism, international money, debt, famine, immigration, and energy shocks. Three lecture hours a week for one semester. Economics 357L and Russian, East European, and Eurasian Studies 335 (Topic 14: Political Economy of International Crises) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

**ECO 358Q. Supervised Research.**

Individual instruction. May be repeated once for credit when the research topics vary. May not be counted toward the twenty-five semester hours in economics required for the major in economics. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.

**ECO 359M. Environmental and Natural Resource Economics.**

Optimal use of exhaustible and renewable resources, including fuels, minerals, fisheries, forests, and water; resource scarcity and economic growth; valuation of nonmarketed environmental amenities; the economics of pollution control instruments, including taxes, permits, direct regulation, and negotiation; environmental quality and international trade; the economics of global climate change; pollution control policy in practice. Three lecture hours a week for one semester. Prerequisite: Economics 420K and 329 with a grade of at least C- in each.

**ECO 361. Studies in Public Economics.**

Studies in the principal problem areas of governmental revenues and expenditures. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-.

**ECO 361N. Informational Society.**

The social impact of the current technological changes in electronics, communications, and automation; focus on efficient institutions given the technological possibilities. Three lecture hours a week for one semester. Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

**ECO 362M. Mathematics for Economists.**

Application of mathematics in economic analysis. Three lecture hours a week for one semester. Prerequisite: Economics 420K, and Mathematics 408D or 408M, with a grade of at least C- in each.

**ECO 363C. Computational Economics.**

Three lecture hours a week for one semester. Prerequisite: Economics 420K or 320L with a grade of at least C-.

**ECO 367R. Monetary Economics.**

Major issues in the monetary field. Three lecture hours a week for one semester. Prerequisite: Economics 430K and 320L with a grade of at least C- in each.

**ECO 368. Survey of the History of Economic Thought.**

Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**ECO 369F. Financial Economics.**

Economic analysis of the operation of financial markets, including arbitrage theory, asset pricing, and corporate finance. Three lecture hours a week for one semester. Prerequisite: Economics 420K, 320L, and 329 with a grade of at least C- in each.

**ECO 372M. Studies in Developing Economies.**

An introductory analysis of the structure, functioning, and problems of developing economies. Specific geographical areas to be studied will vary each semester. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-.

**ECO 376M. Studies in Labor Economics.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Economics 420K with a grade of at least C-.

**ECO 377R. Selected Topics in Economics Research.**

Designed to teach undergraduate students how to conduct research. Focus on four fundamentals of economic research: the economic theory that underlies the research question, the research methods used, conducting research, and writing the research report. Three lecture hours a week for one semester; some topics may require field trips. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and Economics 420K, 320L, and 329 with a grade of at least C- in each.

**ECO 378H. Honors Tutorial Course I.**

Supervised individual reading, research, and writing of a substantial paper on a special topic in the field of economics. Conference course.



Prerequisite: Upper-division standing, admission to the Economics Honors Program, and consent of the honors adviser.

### **ECO 379C. Individual Conference Course.**

Supervised individual study of selected problems in economics. Conference course. May not be counted toward the twenty-four semester hours in economics required for the major in economics. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor. Students should ordinarily have completed six semester hours of upper-division coursework in economics and coursework with supervising instructor.

### **ECO 379D. Internship in Economics.**

Students conduct research while working in an appropriate government agency or private business. Ten hours of fieldwork a week for one semester. May be repeated once for credit when the internships vary. Offered on the pass/fail basis only. Prerequisite: Economics 420K with a grade of at least C-.

### **ECO 379H. Honors Tutorial Course II.**

Supervised individual reading, research, and writing of a substantial paper on a special topic in the field of economics. Conference course. Prerequisite: Economics 378H.

## **Department of English**

Students are discouraged from taking more than six semester hours of coursework in English in a semester or summer term. No student may take more than nine semester hours of coursework in English in a semester.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **English: E**

### **Lower-Division Courses**

#### **E 603. Composition and Reading in World Literature.**

Reading of masterpieces of world literature and intensive training in writing and in critical analysis of literature. Three lecture hours a week for two semesters. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A; only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Prerequisite: For 603A, admission to the Plan II Honors Program; for 603B, English 603A.

#### **E 314J. Literature across the Curriculum.**

Readings selected to highlight the connections between literary study and other fields of inquiry. Three lecture hours a week for one semester. May not be substituted for English 316K. May be repeated for credit when the topics vary. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

#### **E 314L. Introduction to Literary Studies.**

Emphasis on skills and methods used in upper-division English courses; intensive practice in writing; and an introduction to field-specific research. Three lecture hours a week for one semester. May not be substituted for English 316K. May be repeated for credit when

the topics vary. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

**Topic 3: Banned Books and Novel Ideas.**

**Topic 4: Reading Literature in Context.**

**Topic 5: Reading Poetry.**

**Topic 6: Reading Women Writers.**

**Topic 7: Women's Popular Genres.**

### **E 314V (TCCN: ENGL 2351). Introduction to Literature and Culture.**

Readings in minority and ethnic American literatures in their cultural contexts. Three lecture hours a week for one semester. May not be substituted for English 316K. May be repeated for credit when the topics vary. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

**Topic 1: African American Literature and Culture.** Same as African and African Diaspora Studies 317F (Topic 1: African American Literature and Culture). Introduces key tools of literary analysis through the study of African American literature. Drawn from a variety of genres and periods, the texts indicate the range of African American experiences and how those experiences are influenced by issues such as class, ethnicity, gender, sexuality, and race. Only one of the following may be counted: English 314V (Topic 1), African and African Diaspora Studies 317 (Topic 1: African American Literature and Culture), 317F (Topic 1).

**Topic 2: Asian American Literature and Culture.** Same as Asian American Studies 314. Explores how authors and artists over the course of the past century have imagined what it means to be Asian American. Covers a diverse range of Asian immigrant histories and the formation of Asian American identities according to ethnicity, gender, sexuality, class, and citizenship.

**Topic 3: Mexican American Literature and Culture.** Same as Mexican American Studies 314. Introductory course concerned with representative contemporary Chicano writers and genres, such as poetry, prose fiction, and theatre. May not be substituted for English 316K.

**Topic 4: Gay and Lesbian Literature and Culture.** Same as Women's and Gender Studies 301 (Topic 12: Gay and Lesbian Literature and Culture).

**Topic 5: Native American Literature and Culture.** Same as American Studies 315F. Studies Native American literature from different regions and cultures and considers this literary tradition in tribal national and United States national contexts. Only one of the following may be counted: American Studies 315 (Topic: Native American Literature and Culture), 315F, English 314V (Topic 5).

### **E 315F. Introduction to Writing Fiction.**

Three lecture hours a week for one semester. Large sections require an additional discussion hour a week. English 315F and 318L (Topic 1: Fiction) may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

### **E 315P. Introduction to Writing Poetry.**

Three lecture hours a week for one semester. Large sections require an additional discussion hour a week. English 315P and 318L (Topic 2: Poetry) may not both be counted. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

**E 316K (TCN: ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2331, ENGL 2332, ENGL 2333). Masterworks of Literature.**

Three versions: World, British, American. Introduction to masterpieces of the literary tradition, emphasizing historical, generic, thematic connections. Three lecture hours a week for one semester. Large sections require an additional discussion hour a week. Only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Only one version of 316K may be taken for credit. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A; and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.

**E 318M. Introduction to the English Language.**

Basic linguistic concepts; phonology, syntax, and vocabulary of English; historical, regional, and social variation; applications of linguistics in educational and social action. Three lecture hours a week for one semester. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

**E 318Q. Supervised Research.**

Student-initiated research conducted with instructor supervision. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: Approval of written application by supervising instructor and the undergraduate faculty adviser.

**E 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in English.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of English. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses**

**E 320L. Major Writers of the Restoration and Eighteenth Century.**

A study of the principal writers: Dryden, Pope, Swift, Johnson, Boswell, Burns, and others. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 321. Shakespeare: Selected Plays.**

A representative selection of Shakespeare's best comedies, tragedies, and histories. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 321K. Introduction to Criticism.**

Introduction to major terms, issues, and approaches in literary criticism, and their application to the reasoned discussion of poetry, fiction, and drama. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 321L. American English.**

Same as Linguistics 321L. An overview of the historical development of English in the Americas. Attention to regional, social, and ethnic differences, and their implications for public education. Three lecture

hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 321P. Shakespeare through Performance.**

An intensive study of the plays of William Shakespeare, with emphasis on performance as a means of interpretation and an aid to comprehension. Three lecture hours a week for one semester, with additional laboratory hours as required. English 321P and 379M (Topic 4: Shakespeare through Performance) may not both be counted. Prerequisites: Nine semester hours of coursework in English or rhetoric and writing, and consent of instructor.

**E 322. Literature in Translation.**

World literatures in English translation. Three lecture hours a week for one semester. English 322 and 324 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 17: Social Dramas of Henrik Ibsen.** Same as Scandinavian 323 (Topic 2: Social Dramas of Henrik Ibsen) and Women's and Gender Studies 345 (Topic 14: Social Dramas of Henrik Ibsen). Men and women in their public and private lives.

**Topic 23: Dante.** Same as Italian Civilization 349 (Topic 2: Dante).

**Topic 37: The Russian Novel.** Same as Russian 356 (Topic 1: The Russian Novel) and Russian, East European, and Eurasian Studies 325 (Topic 9: The Russian Novel). Only one of the following may be counted: English 322 (Topic 37), European Studies 361 (Topic: The Russian Novel), Russian 356 (Topic 1), Russian, East European, and Eurasian Studies 325 (Topic 9).

**E 323L. English as a World Language.**

Same as Linguistics 323L. An account of the spread of English around the world; national, social, and regional varieties. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 324. Topics in Language and Literature.**

Three lecture hours a week for one semester. English 322 and 324 may not both be counted unless the topics vary. Only one of the following may be counted unless the topics vary: English 320M, 324, 376L, 379M, 379N. May be repeated for credit when the topics vary. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

**E 325. Creative Writing.**

Detailed study and practice of the techniques of creative writing; includes reading and analysis of contemporary models. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

**E 325F. Fiction Writing.**

Detailed study and practice of the techniques of fiction writing; includes reading and analysis of contemporary models. Three lecture hours a week for one semester. English 325 (Topic 1: Creative Writing: Fiction) and 325F may not both be counted. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

**E 325P. Poetry Writing.**

Detailed study and practice of the techniques of poetry writing; includes reading and analysis of contemporary models. Three lecture hours a week for one semester. English 325 (Topic 2: Creative Writing:

Poetry) and 325P may not both be counted. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

### **E 326K. The Literature of the Middle Ages in Translation.**

Romances, chronicles, legends, tales, and plays by English, Celtic, and Continental writers. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 326L. Survey of Middle English Language and Literature.**

Language and literature from 1100 to 1500. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 327. The English Novel in the Eighteenth Century.**

Representative novels and novelists from 1700 to 1832, including typical works of Defoe, Richardson, Fielding, Sterne, Austen, and Scott. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 328. The English Novel in the Nineteenth Century.**

Representative works by such writers as Dickens, Thackeray, the Brontës, George Eliot, Meredith, and Hardy. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 329R. The Romantic Period.**

The prose and poetry of writers such as Blake, Wordsworth, Coleridge, Byron, Keats, Shelley, and others. Three lecture hours a week for one semester. English 329K and 329R may not both be counted. English 329L and 329R may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in English.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of English. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **E 336E. British Literature: Beginnings through the Renaissance.**

A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. English 336E and 379N (Topic: British Literature: Beginnings to the Renaissance) may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 337. American Literature: From the Beginnings to 1865.**

A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 337E. British Literature: The Restoration through the Romantic Era.**

A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 338. American Literature: From 1865 to the Present.**

A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 338E. British Literature: The Victorian Era through World War II.**

A survey of major writers, poetry, and prose. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 340. The American Novel before 1920.**

Representative novels by such writers as Brown, Melville, Fern, Hawthorne, Twain, Crane, James, Wharton, and Dreiser. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 341. Short Story Workshop.**

Practice in writing the short story, with study of contemporary models. Three lecture hours a week for one semester. Prerequisite: English 325F.

### **E 341L. Poetry Workshop.**

Practice in writing poetry, with study of contemporary models. Three lecture hours a week for one semester. Prerequisite: English 325P.

### **E 342. Life and Literature of the Southwest.**

Verse, fiction, travels, and memoirs, to acquaint students with the literature reflecting the social inheritance of Texas and the neighboring territory. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 1: Life and Literature of the Southwest--Mexican American.** Same as Mexican American Studies 374 (Topic 2: Life and Literature of the Southwest--Mexican American).

### **E 343L. Modernism and Literature.**

Strands of thought and literature that form the network of modernist writing. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 343P. Postmodern Literature.**

Survey of postmodern writing. As a period, the postmodern extends roughly from the era after World War II, and follows the modern, a term often applied to literature produced since the start of World War I. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 344L. Twentieth-Century Literature and Other Media.**

A study of the relationship between literary forms and other media (film, television, music, the visual arts). Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

**Topic 4: Australian Literature and Film.**

### **E 348. The Twentieth-Century Short Story.**

Extensive readings and analyses of stories by major modern writers such as Faulkner, Hemingway, Joyce, Chekhov, and Kafka, as well as contemporary writers. Three lecture hours a week for one semester.

Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

### **E 349S. Topics on Major Authors.**

Intensive study of the works of a single major author or two major authors. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 349S, 370W, 376L, 376M, 379M, 379N. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in English.

**Topic 1: Jane Austen.**

**Topic 2: The Brontës.** English 349S (Topic 2) and 370W (Topic: Brontës: Self and Society) may not both be counted.

**Topic 3: James and Wharton.**

**Topic 4: James Joyce.**

**Topic 5: Toni Morrison.** Same as African and African Diaspora Studies 372E (Topic 1: Toni Morrison) and Women's and Gender Studies 345 (Topic 46: Toni Morrison). An examination of select novels by the Nobel Laureate and Pulitzer Prize-winning novelist focuses on the positional uniqueness that womanism shares with a predominant feminism, which surfaces in historicized familial relationships. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 1), 374F (Topic: Toni Morrison), English 349S (Topic 5), Women's and Gender Studies 340 (Topic: Toni Morrison), 345 (Topic 46).

**Topic 6: Walt Whitman.**

**Topic 7: Oscar Wilde.**

**Topic 8: Virginia Woolf.** Same as Women's and Gender Studies 345 (Topic 40: Virginia Woolf). Examines critical and fictional works of Virginia Woolf and the author's continuing legacy and influence. Explores the value and limitations of high modernism; English literary heritage and tradition; feminism; creative and critical definitions of gender and sexuality; intellectual activism, including Woolf's critiques of patriarchy, war, and fascism; and Woolf and imperialism and colonialism. Only one of the following may be counted: English 349S (Topic 8), 370W (Topic 10: Virginia Woolf), Women's and Gender Studies 345 (Topic 40).

### **E 350E. Topics in Language and Literature: Beginnings to 1630.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 350E, 376L, 379M, 379N. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 1: Classical and Scriptural Backgrounds of Literature.**

**Topic 2: Saracens in Medieval Literature.** Same as Middle Eastern Studies 342 (Topic 18: Saracens in Medieval Literature). Muslims, Arabs, Turks, Persians, Berbers, and Moors were often identified in literature and historical texts under the invented group name Saracens. Course explores who, and what, a Saracen is. Includes selected readings of literature, historical documents, and critical scholarship on Saracens in European medieval romances and epics, crusade literature, travel narratives, maps, and polemical treatises. For critical contrast, readings also include Islamic texts on, or by some of the most famous (or infamous) Saracens known to medieval Europe. Only one of the following may be counted: English 350E (Topic 2), 379N (Topic: Saracens in Medieval Literature), Middle Eastern Studies 321K (Topic: Saracens in Medieval Literature), Middle Eastern Studies 342 (Topic 18).

### **E 350M. Topics in Language and Literature: 1630 to 1830.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 350M, 376L, 379M, 379N. May be repeated for credit when the topics vary.

Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 1: Eighteenth-Century Women Writers.** Same as Women's and Gender Studies 345 (Topic 7: Eighteenth-Century Women Writers). Women writers in the early 18th-century canon. Argues for a historical perspective that demonstrates the centrality of early 18th-century women writers to the western canon. Only one of the following may be counted: English 350M (Topic 1), 376L (Topic: Aphra Behn and 18th Century Women Writers), Women's and Gender Studies 345 (Topic 7).

### **E 350R. Topics in Language and Literature: 1830 to 1940.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 350R, 376L, 379M, 379N. May be repeated for credit when the topics vary.

Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 1: Law, Society, and the Novel in Nineteenth-Century Britain.**

### **E 355K. Advanced Creative Writing.**

A third-semester seminar-style workshop in poetry and/or fiction for experienced creative writers. Three lecture hours a week for one semester. Prerequisite: English 341 or 341L.

### **E 356. The European Novel.**

Same as European Studies 347 (Topic 7: The European Novel). Selected masterpieces of Continental fiction in English translation: representative novelists of the nineteenth and twentieth centuries. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 358J. The Bible as Literature.**

Same as Religious Studies 355. In-depth literary study of the Bible, with emphasis on the formal features of narrative, hymn, prophecy, apocalypse, gospel, and epistle. Three lecture hours a week for one semester. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

### **E 358K. The Bible in British and American Literature.**

Same as Religious Studies 355K. The reading of biblical masterpieces as literature; consideration of different versions of the Bible and their influence on English and American literature. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 358Q. Supervised Research.**

Student-initiated research conducted with instructor supervision. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: Completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by supervising instructor and the undergraduate faculty adviser.



**E 359. English Drama from 1660 to 1900.**

Representative drama texts from the Restoration to the beginnings of modern theatre, including Behn, Sheridan, Wilde, and Shaw. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 360K. English Grammar.**

The study of traditional and transformational grammar. Attention to social differences in language relevant to the teaching of English. Three lecture hours a week for one semester. English 360K and Linguistics 360K may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 360L. English as a World Literature.**

English literature from around the world, including Canada, Australasia, Africa, and India. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 360L, 360S, 376L, 379M, 379N. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 2: Caribbean Literature.** Same as Comparative Literature 323 (Topic 6: Caribbean Literature) and African and African Diaspora Studies 374F (Topic 7: Caribbean Literature).

**E 360R. Literary Studies for High School Teachers of English.**

Intended for students seeking a secondary school teaching certificate. The principles and practices of teaching literature in secondary schools. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 360S. Literature and Global Society.**

Contexts for the study of literature, and for the study of pressing issues through literature, in an age of globalization. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 360S, 376L, 379M, 379N. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 1: Literature and Social Justice.** English 360L (Topic 1: Literature and Social Justice) and 360S (Topic 1) may not both be counted.

**Topic 2: Literature of AIDS in Africa.** Same as African and African Diaspora Studies 372G (Topic 1: Literature of AIDS in Africa). Examines the emerging cultural representations of AIDS in sub-Saharan Africa through journalistic, social science, and historical accounts. Examines the difficulty of representing the various aspects of a public-health crisis. Only one of the following may be counted: African and African Diaspora Studies 372G (Topic 1), 374C (Topic: Literature of African AIDS), English 360S (Topic 2), 376L (Topic: Literature of African AIDS).

**Topic 3: Envisioning Muslims: The Middle Ages and Today.** Same as Middle Eastern Studies 342 (Topic 17: Envisioning Muslims: The Middle Ages and Today). Covers the representation of Muslims in the dominant cultural media of the European Middle Ages and in the contemporary world of the twentieth and twenty-first centuries. Modern cultural media includes film and digital visual media. Readings are selected to show how Europeans envisioned Muslims, and how Muslims envisioned themselves. Only one of the following may be counted: English 360S (Topic 3), 379N (Topic: Envisioning Muslims), Islamic Studies 372 (Topic: Envisioning

Muslims), Middle Eastern Studies 321K (Topic: Envisioning Muslims), 342 (Topic 17).

**E 361K. English Drama to 1642.**

A survey of early English drama, usually including works by Marlowe, Kyd, Shakespeare, Jonson, Webster, and Middleton. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 362L. The British Novel in the Twentieth Century.**

Representative novels, including those of Joyce, Lawrence, and Woolf. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 363. The Poetry of Milton.**

All the poetry of Milton, with particular attention to *Comus*, *Samson Agonistes*, and *Paradise Lost*. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 363K. Classic to Romantic.**

The theory and practice of Classicism in literature and other arts; the rise of the Romantics in the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 364D. Topics in Diverse Perspectives on Language and Culture.**

Studies in English with particular attention to linguistic and cultural diversity. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 364M. History of the English Language.**

Same as Linguistics 364M. Development of sounds, forms, and vocabulary of the English language from its origins to the present. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 364P. Old English.**

An introduction to Old English with sufficient grammar for a reading knowledge of Old English texts. A course in language, not in linguistics. Three lecture hours a week for one semester. English 364P and 395N (Topic 1: Old English) may not both be counted. May be counted as the equivalent to English 364M in fulfilling the requirements for a Bachelor of Arts degree with a major in linguistics. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 364S. Language and Gender.**

Same as Women's and Gender Studies 345 (Topic 17: Language and Gender). Linguistic, social, and political dimensions of gender-related speech differences. Three lecture hours a week for one semester. Only one of the following may be counted: English 346S, Linguistics 373 (Topic: Language and the Sexes), Women's and Gender Studies 345 (Topic 17). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 364T. The English Language and Its Social Context.**

English language history, theory, and research for students of literature and rhetoric. May include such topics as language diversity and variation, linguistic attitudes, language variety and education, and language and public policy. Three lecture hours a week for one

semester. Only one of the following may be counted: English 364T, 376L (Topic: The English Language and Its Social Context), 376L (Topic: The English Language in Its Social Context). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 366K. Shakespeare: Selected Tragedies.**

A representative selection of Shakespeare's tragedies. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 367C. Conference Course in Literature and Language.**

For students who wish to work under supervision on specific projects in literature or language. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: Completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by supervising instructor and the undergraduate faculty adviser.

### **E 367E. English Internship.**

Research and staff experience working in an appropriate agency or private business. At least twelve hours of fieldwork a week for one semester. May not be counted toward the thirty-three hours of English and rhetoric and writing required for the English major. May not be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by the undergraduate faculty adviser.

### **E 367K. Conference Course in Creative Writing.**

For advanced students already proficient in writing who wish to work under supervision on specific and fairly extensive projects. Three conference hours a week for one semester. May be repeated once for credit. Prerequisite: English 325 with a grade of A; completion of at least sixty semester hours of coursework, including at least six semester hours of upper-division coursework in English or rhetoric and writing; a University grade point average of at least 3.00; and approval of written application by supervising instructor and the undergraduate faculty adviser.

### **E 369. Twentieth-Century Drama.**

Ibsen and other major dramatists; tradition and innovation in the substance and form of selected modern plays. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 370. Victorian Prose: Essays and Ideas.**

The prose writer as artist and sage in the cultural, political, religious, and scientific controversies that influence the modern tradition. Representative writers: Carlyle, Mill, Newman, Arnold, Darwin. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 370W. Literature, Culture, and Gender.**

Gender as a category of literary and cultural analysis. Texts may include literature, film, popular culture, and other forms. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 349S, 370W, 376L, 376M, 379M, 379N. May be repeated for credit when the topics vary.

Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 2: Contemporary Women Authors.** Same as African and African Diaspora Studies 374F (Topic 4: Contemporary Women Authors) and Women's and Gender Studies 345 (Topic 15: Contemporary Women Authors).

**Topic 8: Gay and Lesbian Literature and Culture.** Same as Women's and Gender Studies 345 (Topic 30: Gay and Lesbian Literature and Culture).

**Topic 9: Gender, Sexuality, and Migration.** Same as Women's and Gender Studies 345 (Topic 39: Gender, Sexuality, and Migration). Only one of the following may be counted: Asian American Studies 320 (Topic: Gender, Sexuality, and Migration), English 370W (Topic 9), 370W (Topic: Cultures of Immigration and Dislocation), Women's and Gender Studies 345 (Topic 39).

### **E 371K. Twentieth-Century Poetry.**

Poets studied include Eliot, Auden, Stevens, Thomas, Bishop, Rich, and Merwin. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 372L. The American Renaissance.**

Selected writers of the pre-Civil War Romantic movement, including Emerson, Douglass, Fuller, Hawthorne, Melville, Thoreau, Whitman, and others. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 372M. American Realism.**

Selected writers of the post-Civil War realistic movement: Howells, Twain, James, Jewett, Freeman, Crane, and others. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 374G. Beowulf.**

A word-by-word, line-by-line translation, with special attention to language and context. Three lecture hours a week for one semester. English 374G and 379N (Topic: Beowulf) may not both be counted. Prerequisite: English 364P.

### **E 374K. Elizabethan Poetry and Prose.**

Renaissance thought and culture as revealed in the lyric and narrative poetry and in the prose masterpieces. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 374L. The Earlier Seventeenth Century: Donne, Jonson, and Their Contemporaries.**

Poetry and prose, 1600 to 1660: the metaphysical and other leading traditions in poetry; the early poems of Milton; the essay, the character, and other prose forms. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **E 375K. English and American Satire.**

Theory of satire, with readings in the works of such representative figures as Chaucer, Dryden, Pope, Byron, Twain, and Thurber. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 375L. Victorian Literature.**

Poetry and prose, 1832 to 1901; parallel reading in the novel and drama, and attention to the social and intellectual background of the period. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 376. Chaucer.**

Introduction to Chaucer's narrative and poetic art, as shown in a selection from the dream poems, *Troilus and Criseyde*, and the *Canterbury Tales*. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 376M. Studies in Ethnic American Literature.**

Approaches to the literatures of the ethnic American cultural experience, including topics related to African American, Asian American, Mexican American, and Native American literature. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: English 320M, 349S, 370W, 376L, 376M, 379M, 379N. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 3: Writing Slavery.** Same as African and African Diaspora Studies 374F (Topic 6: Writing Slavery).

**Topic 4: Mexican American Modernism.**

**Topic 5: Contemporary Asian American Novels.** Same as Asian American Studies 320 (Topic 3: Contemporary Asian American Novels). Only one of the following may be counted: Asian American Studies 320 (Topic 3), English 376M (Topic 5), 379N (Topic: Contemporary Asian American Novels).

**Topic 6: Contemporary Native American Literature.** English 376M (Topic 6) and 379N (Topic: 20th-Century Native American Literature) may not both be counted.

**E 376R. African American Literature through the Harlem Renaissance.**

Same as African and African Diaspora Studies 372E (Topic 4: African American Literature through the Harlem Renaissance). A survey of African American writing, including autobiography, poetry, fiction, and drama. Authors may include Douglass, Jacobs, Frances E. W. Harper, Chestnutt, Du Bois, Hurston, and Hughes. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 4), 374 (Topic 2: African American Literature through the Harlem Renaissance), 374F (Topic 1: African American Literature through the Harlem Renaissance), English 376R. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 376S. African American Literature since the Harlem Renaissance.**

Same as African and African Diaspora Studies 372E (Topic 5: African American Literature since the Harlem Renaissance). The development of African American poetry, drama, fiction, and nonfiction since the Harlem Renaissance. Authors may include Wright, Ellison, Baldwin, Malcolm X, Baraka, Morrison, Shange, and Charles Johnson. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 5), Studies 374 (Topic 3: African American Literature since the Harlem Renaissance), 374F (Topic 2: African American Literature since the Harlem Renaissance), English 376S. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 377K. The American Novel after 1920.**

Representative works by such writers as Faulkner, Hemingway, Fitzgerald, Larsen, Hurston, Morrison, Bellow, Erdrich, and Tan. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 678S. Shakespeare at Winedale.**

Study and readings of selected works and criticism, culminating in public performance of the plays. For English 678SB, students are required to be in residence at Winedale near Round Top, Texas. For 678SA, the equivalent of five lecture hours a week for one semester; for 678SB, fifteen to eighteen hours of work a day, including weekends. Offered in the summer session only. English 678S and 379M (Topic 2: Shakespeare at Winedale) may not both be counted. Prerequisite: For 678SA, consent of instructor; for 678SB, English 678SA and consent of instructor.

**E 379. American Literature and Thought: 1600-1840.**

Early American literature as an embodiment of American thought and experience. Such topics as European ideas in the New World; the political ideas of Hamilton, Jefferson, and Jackson; nationalism; industrialism. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 679H. Honors Tutorial Course.**

Research into and development of a thesis topic and proposal followed by the writing and defense of a thesis. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 679HA, enrollment in or completion of at least one honors section of an English course, admission to the English Honors Program, and consent of the honors adviser; for 679HB, English 679HA.

**E 379K. American Literature and Thought: 1840-1920.**

Such topics as transcendentalism, manifest destiny, Utopian thought, and the impact of the theory of organic evolution. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 379L. Contemporary Drama.**

Major playwrights since 1950, such as Williams, Shepard, Beckett, Stoppard, Churchill, Fugard, and Pinter. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 379P. Drama in Performance.**

Intensive study of drama through active performance as a means of interpretation and an aid to comprehension. Three lecture hours a week for one semester. English 379M (Topic 6: Modern Drama in Performance) and 379P may not both be counted. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**E 379R. Research Seminar.**

Intensive study of selected topics in English. Three lecture hours a week for one semester. Some sections require additional time for film screenings. Only one of the following may be counted unless the topics vary: English 320M, 376L, 379M, 379N, 379R, 379S. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in English.

# Center for Asian American Studies

## Asian American Studies: AAS

### Lower-Division Courses

#### AAS 301. Introduction to Asian American Studies.

Introduces the interdisciplinary study of Asian immigrants and Asian Americans in the United States. Explores key concepts, including immigration history, identity and community formation, cultural representation, and the intersections of race, class, gender, and sexuality. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 315 (Topic: Introduction to Asian American Studies), Asian American Studies 301, Sociology 308 (Topic: Introduction to Asian American Studies).

#### AAS 310. Introductory Topics in Asian American Studies.

An introduction to Asian American studies through a variety of disciplines. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### AAS 312. Introduction to Asian American History.

Same as History 317L (Topic 4: Introduction to Asian American History). Introduces students to the national and transnational histories of Asian Americans in the United States. Explores a wide range of themes related to the Asian American experience. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history.

#### AAS 314. Asian American Literature and Culture.

Same as English 314V (Topic 2: Asian American Literature and Culture). Explores how authors and artists over the course of the past century have imagined what it means to be Asian American. Covers a diverse range of Asian immigrant histories and the formation of Asian American identities according to ethnicity, gender, sexuality, class, and citizenship. Three lecture hours a week for one semester. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

#### AAS 318Q. Supervised Research.

For Asian American studies majors only. Supervised, student-derived research in Asian American studies. Individual instruction. May be repeated for credit when the research projects vary. Prerequisite: Rhetoric and Writing 306 and consent of the director of the Center for Asian American Studies.

### Upper-Division Courses

#### AAS 320. Topics in Asian American Culture, Literature, and Media Studies.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### Topic 1: Immigrants, Amusements, and Consumer Culture.

Same as American Studies 370 (Topic 25: Immigrants, Amusements, and Consumer Culture). Studies the growth of consumer capitalism as it coincides with the migration and integration of immigrants into American society. Examines the

emergence of consumer culture as a force that defines modern American society and traces its developments and current manifestations throughout the world. Prerequisite: Upper-division standing.

**Topic 2: Comparative Cultures of Beauty.** Same as American Studies 370 (Topic 24: Comparative Cultures of Beauty) and Women's and Gender Studies 345 (Topic 45: Comparative Cultures of Beauty). Examines fashion and beauty as discourses, and cultural practices affecting identity, body politics, race, gender, sexuality, and class. Prerequisite: Upper-division standing.

**Topic 3: Contemporary Asian American Novels.** Same as English 376M (Topic 5: Contemporary Asian American Novels). Only one of the following may be counted: Asian American Studies 320 (Topic 3), English 376M (Topic 5), 379N (Topic: Contemporary Asian American Novels). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

#### AAS 325. Topics in Asian American Economics, History, and Government.

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Filipinos in the United States.** Same as History 357F. Only one of the following may be counted: Asian American Studies 325 (Topic 1), History 357F, 365G (Topic: Filipinos in the United States), 366N (Topic: Filipinos in the United States). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**Topic 2: The Chinese in Diaspora.** Same as History 350L (Topic 65: The Chinese in Diaspora). Explores narratives of migration, race, ethnicity, and a wide range of experiences of acculturation and assimilation from the perspective of a sending society--China--which has one of the longest and most diverse histories of sending people overseas. Over the last millennia, Chinese have migrated around the world and made homes under a great range of adversity and opportunity, producing many stories of human differences and commonalities. Only one of the following may be counted: Asian American Studies 325 (Topic: Chinese in Diaspora), 325 (Topic 2: The Chinese in Diaspora), Asian Studies 361 (Topic: Chinese in Diaspora), 361, 461 (Topic 28), History 350L (Topic: The Chinese in Diaspora), 350L (Topic 65: The Chinese Diaspora). Prerequisite: Upper-division standing.

**Topic 3: The Chinese in the United States.** Same as Asian Studies 340S and History 340S. A lecture and discussion course on the history of the Chinese in the United States from their first arrival in significant numbers during the California Gold Rush of the mid-nineteenth century to the present. Only one of the following may be counted: Asian American Studies 325 (Topic: Chinese in the United States), 325 (Topic 3), Asian Studies 340S, History 340S. Partially fulfills the legislative requirement for American history. Prerequisite: Upper-division standing.

**Topic 4: Taiwan: Colonization, Migration, and Identity.** Same as Asian Studies 340T and History 340T. Explores issues of ethnicity, empire, and modernization in East Asia from the sixteenth century to the present, as seen through encounters between Taiwan and aborigines, Han Chinese, Dutch, Portuguese, the imperial Qing, Japanese, mainland Chinese Nationalist Party (KMT), and the United States. Only one of the following may be counted: Asian American Studies 325 (Topic 4), Asian Studies 340T, 361 (Topic: Taiwan: Colonization, Migration, and Identity), History 340T, 364G



(Topic: Taiwan: Colonization, Migration, and Identity). Prerequisite: Upper-division standing.

**Topic 5: Asian American Jurisprudence.** Same as American Studies 321 (Topic 5: Asian American Jurisprudence) and Government 357M (Topic 9: Asian American Jurisprudence). Introduction to the study of Asian Americans and the law. Examines the historical development of United States law and its relationship to Asian Americans, and of Asian American jurisprudence as an independent field of legal scholarship. Additional prerequisite: Upper-division standing.

### **AAS 330. Topics in Asian American Anthropology, Geography, and Sociology.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Racism and Anti-Racism.** Same as African and African Diaspora Studies 374D (Topic 10: Racism and Anti-Racism). Course examines the few theories/definitions of racism across several fields: anthropology, sociology, psychology, cultural studies, postcolonial studies, gender/sexuality studies. The second half of the course, focuses on anti-racist activism, particularly within people of color and immigrant communities. Prerequisite: Upper-division standing.

### **AAS 335. Topics in Asian American Studies.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **AAS 358Q. Supervised Research.**

For Asian American studies majors only. Supervised, student-derived research in Asian American studies. Individual instruction. May be repeated for credit when the research projects vary. Prerequisite: Upper-division standing, Rhetoric and Writing 306, and consent of the director of the Center for Asian American Studies.

### **AAS 379. Conference Course in Asian American Studies.**

Supervised individual study of selected problems in Asian American studies. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of the director of the Center for Asian American Studies.

### **AAS 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by a semester of research and writing to produce a substantial paper on a specific topic in Asian American studies. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Asian American Studies Honors Program; for 679HB, Asian American Studies 679HA.

## **Center for Mexican American Studies**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University

courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Mexican American Studies: MAS**

### **Lower-Division Courses**

#### **MAS 307. Introduction to Mexican American Cultural Studies.**

An introduction to the theoretical and substantive issues covered under the interdisciplinary rubric of cultural studies. Explores the Mexican American cultural experience through the methodological approaches of historical analysis, cultural critique, and literary production. Three lecture hours a week for one semester.

#### **MAS 308. Introduction to Mexican American Policy Studies.**

An introduction to the basics of policy analysis, employing demographic and empirical information on the Mexican American and Latino populations in the United States. Current policy issues such as bilingual education, affirmative action, the English-only movement, immigration, Latino consumers, Latino entrepreneurship, and NAFTA. Three lecture hours a week for one semester.

#### **MAS 310 (TCCN: HUMA 1305). Chicanos in American Society.**

Same as Sociology 309. Introduction to the study of American character and its bearing on the Chicano experience. Three lecture hours a week for one semester.

#### **MAS 312 (TCCN: GOVT 2311). Mexican American Politics.**

Mexican American political life from 1848 to the present; focuses on Mexican American institutions, values, and political groups. Three lecture hours a week for one semester. Mexican American Studies 312 and 313 may not both be counted. Prerequisite: Three semester hours of lower-division coursework in government.

#### **MAS 313. Latino Politics.**

Analysis of issues involving political institutions and policies, with emphasis on Latino politics. Three lecture hours a week for one semester. Mexican American Studies 312 and 313 may not both be counted. Prerequisite: Three semester hours of lower-division coursework in government.

#### **MAS 314. Mexican American Literature and Culture.**

Same as English 314V (Topic 3: Mexican American Literature and Culture). Introductory course concerned with representative contemporary Chicano writers and genres, such as poetry, prose fiction, and theatre. Three lecture hours a week for one semester. May not be substituted for English 316K. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

#### **MAS 316. History of Mexican Americans in the United States.**

Same as History 314K. Examines the origin and growth of the Mexican American community in the United States. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history.

#### **MAS 318. Mexican American Culture.**

Same as Anthropology 318L. Mexican American cultural distinctiveness in the areas of social organization, child rearing, food

culture, folklore, language, and religion. Three lecture hours a week for one semester.

### **MAS 319. Special Topics.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary.

**Topic 1: Ethnicity and Gender: La Chicana.** Same as Sociology 308D and Women's and Gender Studies 301 (Topic 6: Ethnicity and Gender: La Chicana).

### **MAS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Mexican American Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Mexican American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **MAS 320L. Texas until 1845.**

Same as History 320L. A study of Texas from before the European discovery through the exploration and mission periods to status as a Mexican colony and an independent republic. Three lecture hours a week for one semester. Only one of the following may be counted: History 320L, Mexican American Studies 320L, 374 (Topic: Texas until 1845). Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

### **MAS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Mexican American Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Mexican American Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **MAS 350. Advanced Grammar and Composition for Bilingual/Bicultural Speakers.**

Designed for Hispanic bilingual students whose home language is Spanish, but whose dominant language is English. The principal objective is to learn to write correctly and proficiently and to gain a strong cultural perspective on Latin America. The main focus of the course is on writing discourse, but oral language development is also addressed. Three lecture hours a week for one semester. International Business 372 (Topic 8: Business Spanish) and Mexican American Studies 350 may not both be counted. Prerequisite: Spanish 612 or 312L.

### **MAS 361. Mexican American Cultural Studies Seminar.**

Explores cultural studies literature as read through the experience of the Mexican-origin community in the United States. Discussions include race, class, and feminism. Students write a research paper and deliver a scholarly presentation. Three lecture hours a week for one

semester. Prerequisite: Upper-division standing and Mexican American Studies 307.

### **MAS 362. Mexican American Policy Studies Seminar.**

Profiles the current economic status of Mexican Americans in the United States. Examines two dimensions of public policy: historical trends and comparisons with other ethnic groups. Students write a policy report and deliver a professional presentation. Three lecture hours a week for one semester. Mexican American Studies 362 and 374 (Topic: Mexican American Public Policy Issues) may not both be counted. Prerequisite: Upper-division standing and Mexican American Studies 308.

### **MAS 371. Readings in Mexican American Studies.**

Supervised readings with parallel work in relevant non-Chicano materials; preparation for Mexican American Studies 372. Individual instruction. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.

### **MAS 372. Research Seminar in Mexican American Studies.**

Supervised research on a Mexican American topic chosen in consultation with adviser and leading to a full-length essay. Individual instruction. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.

### **MAS 373. Independent Research.**

Individual instruction. May be repeated for credit. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.

### **MAS 374. Special Topics.**

Three lecture hours a week for one semester. Additional hours are required for some topics; these topics are identified in the Course Schedule. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **Topic 2: Life and Literature of the Southwest--Mexican**

**American.** Same as English 342 (Topic 1: Life and Literature of the Southwest--Mexican American). Verse, fiction, travels, and memoirs, to acquaint students with the literature reflecting the social inheritance of Texas and the neighboring territory. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 3: Chicanos: Sociological Perspectives.** Anglo-American and Mexican American contacts and relations in the southwestern United States from colonial times to the present; emphasis on social and cultural differences and problems of assimilation. Prerequisite: Upper-division standing.

**Topic 4: Narrative Journalism.** Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335, Latin American Studies 322 (Topic 11: Latino Community Journalism), 322 (Topic 11: Narrative Journalism), Mexican American Studies 374 (Topic 4: Latino Community Journalism), 374 (Topic 4: Narrative Journalism). Prerequisite: Upper-division standing and consent of instructor.

**Topic 6: Feature Writing.** Same as Latin American Studies 322 (Topic 4: Feature Writing). Procedures in gathering material for feature stories, with stress on newspaper articles; analysis of reader appeal; study of feature story structure; development of style by practice in writing feature stories. Only one of the following may be counted: Journalism 327, Latin American Studies 322 (Topic 4), Mexican American Studies 374 (Topic 6). Prerequisite: Consent of instructor and a passing score on the College of Communication Grammar, Spelling and Punctuation Test.

**Topic 8: Mexican Americans in the Schooling Process.** Same as Educational Psychology 362 (Topic 4: Mexican Americans in the Schooling Process). Prerequisite: Upper-division standing.

**Topic 9: Hispanic Images and Counterimages.** Same as Latin American Studies 322 (Topic 1: Hispanic Images and Counterimages) and Radio-Television-Film 359S (Topic 1: Hispanic Images and Counterimages). The critical analysis of Hispanic images in media. Three lecture hours and one two-hour film screening a week for one semester. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 10: Latino Audiences.** Same as Latin American Studies 322 (Topic 2: Latino Audiences) and Radio-Television-Film 365 (Topic 2: Latino Audiences). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 11: Mass Media and Ethnic Groups.** Same as Latin American Studies 322 (Topic 3: Mass Media and Ethnic Groups) and Radio-Television-Film 365 (Topic 3: Mass Media and Ethnic Groups). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 14: United States-Mexican Border Relations.** Same as Government 337M (Topic 4: United States-Mexican Border Relations) and Latin American Studies 337M (Topic 4: United States-Mexican Border Relations). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 15: Latino Politics.** Same as Latin American Studies 337M (Topic 8: Latino Politics) and Government 370K (Topic 2: Latino Politics). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 16: Texas, 1914 to the Present.** Same as History 320R and Urban Studies 353 (Topic 2: Texas, 1914 to the Present). The steady dissociation of Texas from its Old South status to a transitional state and a power in national politics. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

**Topic 17: International Communication: Third World Issues.** Same as Latin American Studies 322 (Topic 7: International Communication: Third World Issues) and Radio-Television-Film 342 (Topic 3: Third World Issues). Prerequisite: For radio-television-film majors, upper-division standing; consent of instructor; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 22: Minorities and the Media.** Issues concerning minority or nondominant groups within the United States. Survey of minority communication problems: alienation, fragmentation, media and Internet access; criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Only one of the following may be counted: Journalism 340C (Topic 1: Mass Media and Minorities), 341H, Latin American Studies 322 (Topic 10: Minorities and the

Media), Mexican American Studies 374 (Topic 22), Urban Studies 354 (Topic: Mass Media and Minorities), Women's and Gender Studies 340 (Topic 21: Minorities and the Media). Prerequisite: Upper-division standing.

**Topic 23: Mexican American Indigenous Heritage.** Same as Anthropology 322M (Topic 10: Mexican American Indigenous Heritage). The prehistory, history, and contemporary racial understanding of Mexican Americans. Prerequisite: Upper-division standing.

**Topic 24: Latinos and Media.** Same as Latin American Studies 322 (Topic 12: Latinos and Media) and Radio-Television-Film 365 (Topic 6: Latinos and Media). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 25: Chicano Educational Struggles.** Same as Educational Psychology 362 (Topic 5: Chicano Educational Struggles). Prerequisite: Upper-division standing.

**Topic 28: Politics and Culture of Contemporary Mexico.** Same as Government 337M (Topic 5: Politics and Culture of Contemporary Mexico), Latin American Studies 325 (Topic 3: Politics and Culture of Contemporary Mexico), and Sociology 338M. Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

**Topic 29: Mexican and Mexican American Ballads.** Same as Latin American Studies 370S (Topic 20: Mexican and Mexican American Ballads) and Spanish 350 (Topic 11: Mexican and Mexican American Ballads). Examines the corrido genre in the nineteenth and twentieth centuries, with special focus on its pivotal role in the Mexican Revolution and in the collision between cultures in the border zone. Prerequisite: Spanish 322K or 328.

**Topic 32: Radical Latinos.** Same as American Studies 370 (Topic 39: Radical Latinos). Examines the social positioning and history of Latinas/os in the United States. Analyzes the histories of Latinas/os who have gone against mainstream expectations, or who have challenged or critiqued the status quo in provocative and unexpected ways. Only one of the following may be counted: American Studies 370 (Topic Radical Latinos), 370 (Topic 39), Mexican American Studies 374 (Topic: Radical Latinos), 374 (Topic 32). Prerequisite: Upper-division standing.

### **MAS 375. Internship.**

Restricted to Mexican American studies majors. Students participate in a nonpartisan, direct-service capacity in a community, civic, or government organization or program that facilitates the economic, political, and social development of the Mexican American community. Under the supervision of a faculty member, students write a report based on the internship project. The equivalent of three lecture hours a week for one semester. Additional weekly meeting times are sometimes required. With consent of the director or academic adviser, may be repeated for credit. Prerequisite: Mexican American Studies 310, 318, and 374; or consent of the director.

### **MAS 679H. Honors Tutorial Course.**

Restricted to Mexican American studies majors. Supervised research, readings, and writing of a substantial paper on a Mexican American studies topic. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 679HA, Mexican American Studies 361, 362, or 372 with a grade of A; admission to the Mexican American

Studies Honors Program no later than two semesters before expected graduation; a University grade point average of at least 3.00; and a grade point average in Mexican American studies of at least 3.50; for 679HB, Mexican American Studies 679HA.

## Center for European Studies

### European Studies: EUS

#### Lower-Division Courses

##### **EUS 302. Introductory Interdisciplinary Topics in European Studies.**

Analysis of various aspects of European culture, science, and technology. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **EUS 305. Introduction to European Studies.**

The myths, ideas, and sociopolitical realities that underpin the intellectual and cultural construction of Europe. Core course. Three lecture hours a week for one semester. European Studies 301 (Topic: Introduction to European Studies) and 305 may not both be counted.

##### **EUS 306. Introductory Topics in European Anthropology, Geography, History, and Sociology.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **EUS 307. Introductory Topics in European Culture, Literature, Art, Music, and Media.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **EUS 308. Introductory Topics in European Economics, Government, Business, and Policy.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 301, 302, 306, 307, 308. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **EUS 113. Preparation for Study Abroad in Europe.**

One lecture hour a week for one semester. May not be counted by students who have previously taken an international learning seminar. Offered on the pass/fail basis only.

##### **EUS 318Q. Supervised Research.**

Individual instruction.

##### **EUS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in European Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for European Studies. University credit

is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### Upper-Division Courses

##### **EUS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in European Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for European Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

##### **EUS 340M. Continuity and Change in Modern France.**

Same as French Civilization 340M. Focuses on various social, political, and cultural crises in France from the revolution of 1789 to the present time. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 340M, 361 (Topic: Continuity and Change in Modern France), French 340T, French Civilization 340M. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

##### **EUS 346. Topics in European Anthropology, Geography, History, and Sociology.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **Topic 1: History of Britain from 1783 through World War I.**

Same as History 358M. Surveys the political, social, economic, and intellectual history of Great Britain from the years preceding the outbreak of the French Revolution to the conclusion of World War I. Only one of the following may be counted: European Studies 346 (Topic 1), 361 (Topic 4: England in the Nineteenth Century), History 358M. Prerequisite: Upper-division standing.

##### **Topic 2: Great Discoveries in Archaeology.**

Same as Anthropology 326F. The stories, myths, and people behind some of the great archaeological discoveries. Only one of the following may be counted: Anthropology 324L (Topic: Great Discoveries in Archaeology), Anthropology 326F, European Studies 346 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Witches, Workers, and Wives.** Same as History 343W and Women's and Gender Studies 345 (Topic 29: Witches, Workers, and Wives). Explores the role of families and concepts of gender as expressed in key economic, social, political, and cultural patterns in early modern Europe. Prerequisite: Upper-division standing.

**Topic 4: Law and Society in Early Modern Europe.** Same as History 350L (Topic 57: Law and Society in Early Modern Europe) and Women's and Gender Studies 340 (Topic 13: Law and Society in Early Modern Europe). Research seminar on how historians have explored the significance of law, criminal and civil, in the lives of early modern Europeans. Topics include infanticide, fornication, drunkenness, theft, debt, slander, and family disputes. Only one of the following may be counted: European Studies 346 (Topic 4), 361 (Topic: Law and Society in Early Modern Europe), History



350L (Topic 57), Women's and Gender Studies 340 (Topic 13). Prerequisite: Upper-division standing.

**Topic 5: Vienna: Memory and the City.** American Studies 370 (Topic 41: Vienna: Memory and the City), History 362G (Topic 2: Vienna: Memory and the City), and Urban Studies 354 (Topic 7: Vienna: Memory and the City). Examines the ways in which cultural memory has shaped, and continues to shape, urban life in Vienna, Austria. Only one of the following may be counted: American Studies 315 (Topic: Vienna: Memory and the City), 370 (Topic 41), European Studies 301 (Topic: Vienna: Memory and the City), 306 (Topic: Vienna: Memory and the City), 346 (Topic 5), Geography 309 (Topic: Vienna: Memory and the City), Germanic Civilization 311(Topic: Vienna: Memory and the City), History 306N (Topic: Vienna: Memory and the City), 362G (Topic 2), Urban Studies 305 (Topic: Vienna: Memory and the City), 354 (Topic 7). Prerequisite: Upper-division standing.

### **EUS 347. Topics in European Culture, Literature, Art, Music, and Media.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Italian Civilization.** Same as Italian Civilization 360. Survey of the social, political, and cultural history of Italy. Taught in English. Only one of the following may be counted: European Studies 347 (Topic 1), 361 (Topic 7: Italian Civilization), Italian Civilization 360. With consent of the undergraduate adviser in the Department of French and Italian, may be counted toward a major in Italian. Prerequisite: Upper-division standing.

**Topic 2: German Cinema since 1933.** Same as Germanic Civilization 361E (Topic 2: German Cinema since 1933). Only one of the following may be counted: English 322 (Topic 12: German Cinema since 1933), European Studies 347 (Topic 2), 361 (Topic 17: German Cinema since 1933), Germanic Civilization 361E (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Introduction to Germanic Religion and Myth.** Same as Germanic Civilization 340E (Topic 1: Introduction to Germanic Religion and Myth) and Religious Studies 365 (Topic 2: Introduction to Germanic Religion and Myth). Only one of the following may be counted: English 322 (Topic 2: Introduction to Germanic Religion and Myth), European Studies 347 (Topic 3), 361 (Topic 6: Introduction to Germanic Religion and Myth), Germanic Civilization 340E (Topic 1), Religious Studies 365 (Topic 2). Prerequisite: Upper-division standing.

**Topic 4: Literature in the New German Cinema.** Same as Germanic Civilization 361E (Topic 4: Literature in the New German Cinema). Only one of the following may be counted: European Studies 347 (Topic 4), 361 (Topic 1: Literature in the New German Cinema), Germanic Civilization 361E (Topic 3). Prerequisite: Upper-division standing.

**Topic 5: Genres, Structure, and Trends in German Cinema.** Same as Germanic Civilization 361E (Topic 3: Genres, Structure, and Trends in German Cinema). Only one of the following may be counted: English 322 (Topic 13: Genres, Structure, and Trends in German Cinema), European Studies 347 (Topic 5), 361 (Topic 2: Genres, Structure, and Trends in German Cinema), Germanic Civilization 361E (Topic 3), Germanic Civilization 362E (Topic 3). Prerequisite: Upper-division standing.

**Topic 6: The German Folktale and Fantasy Tale.** Same as Germanic Civilization 362E (Topic 3: The German Folktale and Fantasy Tale). Only one of the following may be counted: English 322 (Topic 30: The German Folktale and Fantasy Tale), European

Studies 347 (Topic 6), 361 (Topic 16: The German Folktale and Fantasy Tale), Germanic Civilization 362E (Topic 3). Prerequisite: Upper-division standing.

**Topic 7: The European Novel.** Same as English 356. Selected masterpieces of Continental fiction in English translation: representative novelists of the nineteenth and twentieth centuries. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **EUS 348. Topics in European Economics, Government, Business, and Policy.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Governments and Politics of Eastern Europe.** Same as Government 324J and Russian, East European, and Eurasian Studies 335 (Topic 2: Governments and Politics of Eastern Europe). Only one of the following may be counted: European Studies 348 (Topic 1), 361 (Topic 14: Governments and Politics of Eastern Europe), Government 324J, Russian, East European, and Eurasian Studies 335 (Topic 2). Prerequisite: Six semester hours of lower-division coursework in government.

### **EUS 350. Governments and Politics of Western Europe.**

Same as Government 324L. Comparative study of peoples, institutions, parties, interest groups, and bureaucracy in the countries of Western Europe, concentrating on the major political systems of Britain, France, Germany, and Italy. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 350, 361 (Topic 14: Governments and Politics of Western Europe), Government 324L. Prerequisite: Six semester hours of lower-division coursework in government.

### **EUS 356. Germany and Europe since 1945.**

Restricted to students participating in the summer program in Wuerzburg, Germany. The equivalent of three lecture hours a week for one semester. European Studies 356 and 361 (Topic: Germany and Europe since 1945) may not both be counted. Prerequisite: Upper-division standing and consent of instructor.

### **EUS 358Q. Supervised Research.**

Individual instruction. Prerequisite: Upper-division standing.

### **EUS 362. Independent Research in European Studies.**

Tutorially directed research on a modern European topic. Conference course. Required for the concentration in European studies. May be repeated for credit. Prerequisite: Upper-division standing, admission to the European studies program, and consent of instructor.

### **EUS 363. Interdisciplinary Topics in European Studies.**

An analysis of various aspects of European culture, science, and technology. Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: European Studies 346, 347, 348, 361, 363. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **EUS 375. Capstone Research in European Studies.**

Supervised research on a modern European topic chosen in consultation with the student's adviser and culminating in a full-length

thesis. Individual instruction. Prerequisite: Upper-division standing, admission to the European studies major, and consent of instructor.

## Department of French and Italian

In all French civilization and Italian civilization courses, both lectures and readings are in English. In French 301, lectures are in English and readings are in French. All other courses are conducted primarily in the foreign language.

Students with knowledge of either language must take appropriate steps to determine at which level they may begin work at the University. Students with transfer credit for college work done at another institution may start at the next higher level here. All other students with knowledge of either language are required to take the placement test administered by the Center for Teaching and Learning for placement in French or the departmentally administered classification test for placement in Italian.

Students are urged to consult departmental advisers about any problem either with placement or with credit by examination.

Students who wish to continue their study of French or Italian may consult departmental advisers about appropriate upper-division courses and prerequisites.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### French: FR

#### Lower-Division Courses

##### FR 301. French for Graduate Students in Other Departments.

No auditors permitted. Intensive reading course for graduate students, emphasizing basic grammar and vocabulary with translation practice. Three lecture hours a week for one semester. The symbol CR fulfills the foreign language requirement for the Doctor of Philosophy degree in some departments. May not be used to fulfill the foreign language requirement for any bachelor's degree. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

##### FR 601C. Beginning French.

An intensive beginning course with an emphasis on basic skills: listening, speaking, reading, and writing. Six lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 506. Only one of the following may be counted: French 601C, 604, 507, 508K.

##### FR 604. Accelerated First-Year French.

Designed for students of high motivation. A six-hour course comparable to French 506 and 507. Six lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 506. Only one of the following may be counted: French 601C, 604, 507, 508K.

##### FR 506 (TCCN: FREN 1511). First-Year French I.

Emphasis on basic skills: listening, speaking, reading, and writing. Designed for students with no previous coursework in French. Five

lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 506.

##### FR 507 (TCCN: FREN 1512). First-Year French II.

Five lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 507, 508K. Prerequisite: French 506 completed at the University with a grade of at least C.

##### FR 508K. Alternate First-Year French II.

An accelerated review of material covered in French 506, followed by study of new material covered in French 507. Five lecture hours a week for one semester. Only one of the following may be counted: French 601C, 604, 507, 508K. Prerequisite: Transfer credit or credit by examination for French 506; or credit for French 506 earned at the University more than one calendar year prior to registering, with a grade of at least C.

##### FR 611C. Intermediate French.

An intensive intermediate course with emphasis on basic skills: listening, speaking, reading, and writing. Does not meet the prerequisite requirements for French 320E or 324L. Six lecture hours a week for one semester. Only one of the following may be counted: French 611C, 612, 312K. French 310L and 611C may not both be counted. French 611C and 612 may not both be counted. French 611C and 312L may not both be counted. Prerequisite: French 601C, 604, 507, or 508K with a grade of at least C.

##### FR 612. Accelerated Second-Year French: Four Skills.

Designed for students of high motivation. A six-hour course comparable to French 312K and 312L combined. Six lecture hours a week for one semester. Only one of the following may be counted: French 310L, 612, 312L, 312N. Only one of the following may be counted: French 611C, 612, 312K. French 611C and 612 may not both be counted. Prerequisite: French 604, 507, or 508K with a grade of at least C.

##### FR 312K (TCCN: FREN 2311). Second-Year French I: Four Skills.

Listening, speaking, reading, and writing at the second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: French 611C, 612, 312K. Prerequisite: French 604, 507, or 508K with a grade of at least C.

##### FR 312L (TCCN: FREN 2312). Second-Year French II: Four Skills.

Listening, speaking, reading, and writing at the advanced, second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: French 310L, 612, 312L, 312N. French 611C and 312L may not both be counted. Prerequisite: French 312K with a grade of at least C.

##### FR 317C. Enhancing French Skills.

Listening, speaking, reading, and writing course designed to provide students who have credit for French 611C with additional preparation for upper-division French courses. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: French 611C with a grade of at least C.

##### FR 118L. Practice in Spoken French.

Designed to be taken concurrently with French 317C. Two lecture hours a week for one semester. May not be counted toward fulfillment

of the foreign language requirement for any bachelor's degree.  
Prerequisite: French 611C or 312K with a grade of at least C.

**FR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S.**  
**Topics in French.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses**

**FR 320E. Advanced French I.**

Designed to develop the listening, speaking, reading, and writing skills needed for the analysis of literary and cultural readings in the French-speaking world. Three lecture hours a week for one semester. Prerequisite: French 612, 312L, (312N), or 317C with a grade of at least C.

**FR 120M. Advanced Practice in Spoken French I.**

Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: French 612, 312L, (312N), or 317C with a grade of at least C.

**FR 120N. Advanced Practice in Spoken French II.**

Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Completion of at least one upper-division French course, or equivalent proficiency.

**FR 322E. Advanced French II.**

Continuation of French 320E. Designed to develop the listening, speaking, reading, and writing skills needed to analyze literary and cultural readings in the French-speaking world. Three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 324L. Practical Phonetics.**

A thorough review of French phonetics, with emphasis on improving production and understanding of spoken French. Three lecture hours a week for one semester. Prerequisite: French 612, 312L, (312N), or 317C with a grade of at least C.

**FR 326K. Introduction to French Literature I: From the Middle Ages through the Eighteenth Century.**

Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 326L. Introduction to French Literature II: From the French Revolution to the Present.**

Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S.**  
**Topics in French.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's

Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**FR 130D. French across Disciplines.**

Students read and discuss French language materials related to the subject matter of another designated course. One lecture hour a week for one semester. Prerequisite: Upper-division standing and three semester hours of upper-division coursework in French.

**FR 330K. Studies in French Language and Cultures.**

Topics with a focus on language or culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: French 320E.

**Topic 1: Scientific French.**

**FR 340C. The Arts in France.**

A survey of the major artistic styles, modes, and currents in painting, architecture, sculpture, the decorative arts, and costume, from the medieval through the contemporary periods. Three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 340P. The Making and Identity of France.**

The general political history of France, from the nation's inception to its current existence as part of the European Community. Three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 340T. France and the Francophone World Today.**

An introduction to life in France and francophone regions through the study of contemporary society and culture. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 340M, 361 (Topic: Continuity and Change in Modern France), French 340T, French Civilization 340M. Prerequisite: French 320E.

**FR 342C. French for Business.**

Development of the ability to function in French in business-related situations, both orally and in writing. Three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 348. French Drama Workshop.**

Intensive analysis of one or several plays or short literary texts, with emphasis on diction, delivery of lines, acting and staging; public performance of one play. The equivalent of three lecture hours a week for one semester. Prerequisite: French 320E.

**FR 355. Topics in Medieval and Renaissance French Literature.**

Study of literary texts from the Middle Ages and the Renaissance. Topics may focus on a specific writer or period, a genre, or a theme. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.

**FR 356. Topics in French Literature of the Baroque, Classicism, and the Enlightenment.**

Study of literary texts of the seventeenth-century baroque and classical periods and the eighteenth-century Enlightenment. Topics may focus on a specific writer or period, a literary mode or movement, a genre, or a theme. Three lecture hours a week for one semester. May be

repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.

### **FR 357. Topics in French Literature from the Nineteenth Century to the Present.**

Study of literary texts since the French revolution. Topics may focus on a specific writer or period, a literary mode or movement, a genre, or a theme. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.

### **FR 358. Seminar in French and Francophone Studies.**

Topics in literature or culture, with a focus on study in depth or on synthesis. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.

### **FR 359. Topics in French Linguistics.**

Advanced introduction to linguistic analysis of French. Topics may include analysis of contemporary French, introduction to French linguistics, contrastive analysis of French and English, and advanced French grammar. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in French.

### **FR 364L. Introduction to French Linguistics.**

Introduction to the syntactic, phonological, morphological, lexical, historical, and applied aspects of French linguistics. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in French.

### **FR 165K, 265K, 365K. Conference Course.**

Supervised individual study of selected problems in French language and literature. Prerequisite: French 612, 312L, (312N), or 317C; and consent of instructor.

### **FR 371L. Advanced Written and Oral Composition.**

Designed to guide students toward smooth and effective written and oral expression; weekly compositions on assigned topics; periodic oral presentations. Three lecture hours a week for one semester. Prerequisite: French 320E and 322E.

### **FR 372. Comparative Stylistics.**

Comparison of contemporary French and English syntax and style; study and practice in the technical difficulties of English-to-French and French-to-English translation. Three lecture hours a week for one semester. Prerequisite: French 320E and 322E.

### **FR 379H. Honors Tutorial Course.**

Supervised individual research on a literary, linguistic, or cultural topic, and writing and defense of a thesis under the direction of a committee of two faculty members. Conference course. Prerequisite: Admission to the French Honors Program.

## **French Civilization: F C**

### **Lower-Division Courses**

#### **F C 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in French Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's

Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated study program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **F C 320. The French Heritage.**

Introduction to French civilization: architecture, painting, music, and social and political history. Given in English; requires no knowledge of French. Three lecture hours a week for one semester. May not be counted toward a major or minor in French. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

#### **F C 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in French Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **F C 339. The Development of the French Film.**

Films in French, with subtitles in English; lectures in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. English 322 (Topic 20: The Development of the French Film) and French Civilization 339 may not both be counted. Prerequisite: Upper-division standing.

#### **F C 340M. Continuity and Change in Modern France.**

Same as European Studies 340M. Focuses on various social, political, and cultural crises in France from the revolution of 1789 to the present time. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 340M, 361 (Topic: Continuity and Change in Modern France), French 340T, French Civilization 340M. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

#### **F C 345. Studies in the Cultures of French-Speaking Peoples.**

Lectures and readings in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

##### **Topic 1: The Cultural and Intellectual History of France and Germany, 1870 to 1945.**

#### **F C 349. French Literature in Translation.**

Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.



## Italian: ITL

### Lower-Division Courses

#### ITL 601C. Beginning Italian.

An intensive beginning course with an emphasis on basic skills: listening, speaking, reading, and writing. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 506. Only one of the following may be counted: Italian 601C, 604, 507.

#### ITL 604. Accelerated First-Year Italian.

Designed for students of high motivation. A six-hour course comparable to Italian 506 and 507. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 506. Only one of the following may be counted: Italian 601C, 604, 507.

#### ITL 305. Introduction to Italian Language and Culture.

An introductory course in Italian language and culture taught in Castiglion-Fiorentino, Italy. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Designed for students studying abroad who wish to receive University credit.

#### ITL 506 (TCCN: ITAL 1511). First-Year Italian I: Language and Culture.

Grounding in the basic skills: listening, speaking, reading, and writing; one class hour a week devoted to Italian cultural topics. Five lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 506.

#### ITL 507 (TCCN: ITAL 1512). First-Year Italian II: Language and Culture.

Emphasis on basic skills: listening, speaking, reading, and writing; one class hour a week devoted to Italian cultural topics. Five lecture hours a week for one semester. Only one of the following may be counted: Italian 601C, 604, 507. Prerequisite: Italian 506 with a grade of at least C.

#### ITL 611C. Intermediate Italian.

An intensive intermediate course with an emphasis on basic skills: listening, speaking, reading, and writing. Does not meet the prerequisite requirements for Italian 328, 326K, or 326L. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312K. Only one of the following may be counted: Italian 611C, 612, 312L. Prerequisite: Italian 601C, 604, or 507 with a grade of at least C.

#### ITL 612. Accelerated Second-Year Italian.

Comparable to Italian 312K and 312L combined. Intensive work in writing, reading, and speaking at the second-year level. Six lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312K. Only one of the following may be counted: Italian 611C, 612, 312L. Prerequisite: Italian 604 or 507 with a grade of at least C.

#### ITL 312K (TCCN: ITAL 2311). Second-Year Italian I.

Listening, speaking, reading, and writing at the second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312K. Prerequisite: Italian 604 or 507 with a grade of at least C.

#### ITL 312L (TCCN: ITAL 2312). Second-Year Italian II.

Listening, speaking, reading, and writing at the advanced second-year level. Three lecture hours a week for one semester. Only one of the following may be counted: Italian 611C, 612, 312L. Prerequisite: Italian 312K with a grade of at least C.

#### ITL 317C. Enhancing Italian Skills.

Listening, speaking, reading, and writing course designed to provide students who have credit for Italian 611C with additional preparation for upper-division Italian courses. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Italian 611C with a grade of at least C.

#### ITL 118K. Practice in Spoken Italian I.

Designed to be taken concurrently with Italian 312K. Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Italian 604 or 507 with a grade of at least C.

#### ITL 118L. Practice in Spoken Italian II.

Designed to be taken concurrently with Italian 312L. Two lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Italian 611C or 312K with a grade of at least C.

#### ITL 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Italian.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### ITL 321. Introduction to Italian Literature.

Reading and analysis of literature, literary criticism, textual analysis. Three lecture hours a week for one semester. Italian 321 and 326K may not both be counted; Italian 321 and 326L may not both be counted. Prerequisite: Credit or registration for Italian 328.

#### ITL 322L. Tradition and Change in Contemporary Italy.

An analysis of Italy's trends and of conflicting values in its political, economic, and social development. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in Italian.

#### ITL 326K. Introduction to Italian Literature I: From the Middle Ages to the Eighteenth Century.

Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture hours a week for one semester. Italian 321 and 326K may not both be counted. Prerequisite: Credit or registration for Italian 328.

#### ITL 326L. Introduction to Italian Literature II: From the Eighteenth Century to the Present.

Introduction to the reading and analysis of representative texts, with some attention to cultural and historical background. Three lecture

hours a week for one semester. Italian 321 and 326L may not both be counted. Prerequisite: Credit or registration for Italian 328.

### **ITL 328. Composition and Conversation.**

Focuses on idioms, grammar, syntax, and style. Three lecture hours a week for one semester. Prerequisite: Italian 611C, 612, or 312L with a grade of at least C.

### **ITL 329. Advanced Composition and Conversation.**

Advanced work in writing and speech, based on current events and contemporary readings. Three lecture hours a week for one semester. Prerequisite: Italian 328.

### **ITL 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Italian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **ITL 130D. Italian across Disciplines.**

Students read and discuss Italian language materials related to the subject matter of another designated course. One lecture hour a week for one semester. Prerequisite: Upper-division standing, three semester hours of upper-division coursework in Italian, and consent of instructor.

### **ITL 330K. Studies in Italian Language.**

Study in specific areas of Italian language. Topics may include history of the Italian language, applied Italian linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Italian 328.

### **ITL 331. Topics in Italian Culture.**

Analysis of Italian culture. Texts include literature, film, popular culture, and other forms. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Italian 328.

### **ITL 348. Italian Drama Workshop.**

Intensive analysis of one or several plays or short literary texts, with emphasis on diction, delivery of lines, and acting and staging. Three lecture hours a week for one semester, with additional rehearsal hours to be arranged. Prerequisite: The following coursework with a grade of at least C in each: Italian 321 and 328, or Italian 326K and 326L.

### **ITL 365. Conference Course in Italian Language and Literature.**

Course content varies according to needs of students; designed to fill in gaps and give students a good overall picture of the development of Italian literature. Conference course. Prerequisite: Upper-division standing and consent of the undergraduate adviser or the chair. Italian majors may take conference courses only in exceptional cases.

### **ITL 375. Studies in Italian Literature.**

Intensive examination of a period or a major writer. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: The following coursework with a grade of at least C in each: Italian 321 and 328, or Italian 326K and 326L.

### **ITL 379H. Honors Tutorial Course.**

Supervised individual research on a literary, linguistic, or cultural topic, and writing and defense of a thesis under the direction of a committee of two faculty members. Conference course. Prerequisite: Admission to the Italian Honors Program.

## **Italian Civilization: ITC**

### **Lower-Division Courses**

#### **ITC 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Italian Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **ITC 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Italian Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of French and Italian. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **ITC 349. Italian Literature in Translation.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Italian Cinema.** English 322 (Topic 22: Italian Cinema) and Italian Civilization 349 (Topic 1) may not both be counted.

**Topic 2: Dante.** Same as English 322 (Topic 23: Dante).

**Topic 3: Great Italian Novels and Plays.**

**Topic 5: Italian Women Writers.** Same as Women's and Gender Studies 340 (Topic 17: Italian Women Writers). Only one of the following may be counted: English 322 (Topic 38: Italian Women Writers), Italian Civilization 349 (Topic 5), Women's and Gender Studies 340 (Topic 17).

#### **ITC 360. Italian Civilization.**

Same as European Studies 347 (Topic 1: Italian Civilization). Survey of the social, political, and cultural history of Italy. Taught in English. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 347 (Topic 1), 361 (Topic 7: Italian Civilization), Italian Civilization 360. With consent of the undergraduate adviser in the Department of French and Italian, may be counted toward a major in Italian. Prerequisite: Upper-division standing.

# Department of Geography and the Environment

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Geography: GRG

### Lower-Division Courses

#### **GRG 301C (TCCN: GEOG 1301). The Natural Environment.**

Geomorphic processes that shape the earth's surface; origin and evolution of landforms. Groundwater and water resources. Pedogenesis and soil properties. Three lecture hours and one and one-half laboratory hours a week for one semester, and a one-day field trip.

#### **GRG 301K (TCCN: GEOL 1347). Weather and Climate.**

A survey of meteorological phenomena and climatological processes of the earth. Three lecture hours a week for one semester.

#### **GRG 302P. Topics in Cultural Geography.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### **GRG 303P. Topics in Physical Geography.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester. Additional hours may be required for some topics. Only one of the following may be counted unless the topics vary: Geography 303P, 304P, 309. May be repeated for credit when the topics vary.

#### **GRG 304E. Environmental Science: A Changing World.**

Surveys the major global environmental concerns affecting the Earth and its residents from the perspectives of the environmental sciences. Three lecture hours and one and one-half laboratory hours a week for one semester.

#### **GRG 304P. Topics in Geographical Methods.**

Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted unless the topics vary: Geography 303P, 304P, 309. May be repeated for credit when the topics vary.

#### **GRG 305 (TCCN: GEOG 1303). This Human World: An Introduction to Geography.**

Introductory survey of human geography, including human-environment relations, cultural patterns and processes, and geography's relation to other fields of study. Three lecture hours and one laboratory hour a week for one semester.

#### **GRG 306C. Conservation.**

Introduction to environmental management, with emphasis on the major causes and consequences of environmental degradation. The course is organized around the premise that people cannot solve environmental problems unless they know how and why they occur; a major objective is to identify and understand the sociocultural forces

that drive environmental degradation. Three lecture hours a week for one semester.

#### **GRG 307C. Introduction to Urban Studies.**

Same as Urban Studies 301. A multidisciplinary study of cities and complex urban environments; historical and contemporary issues from both national and international perspectives. Three lecture hours a week for one semester.

#### **GRG 308. Computer Cartography.**

An introduction to the computer languages, equipment, and techniques employed in modern automated cartography. Three lecture hours a week for one semester.

#### **GRG 309. Topics in Human Geography.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Geography 303P, 304P, 309. May be repeated for credit when the topics vary.

#### **GRG 310C. Spatial Data and Analysis.**

Fundamental concepts in spatial data acquisition, analysis, and presentation, with emphasis on the needs of professionals in cartography, geographic information systems (GIS), and remote sensing. Three lecture hours a week for one semester.

#### **GRG 312. Maps and Map Interpretation.**

History of maps and mapping; types and uses; chief sources; reading and interpretation. Three lecture hours a week for one semester.

#### **GRG 319. Geography of Latin America.**

Same as Latin American Studies 319. Adaptations to population growth and spatial integration in cultural landscapes of great natural and ethnic diversity; problems of frontiers and cities. Three lecture hours a week for one semester.

#### **GRG 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Geography.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Geography and the Environment. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### **GRG 320K. Land and Life: The American Southwest.**

Historical geography of the southwestern United States, emphasizing the ways of life of American Indian, Spanish, mestizo, and Anglo cultures. Three lecture hours a week for one semester, with one field trip to be arranged. Prerequisite: Upper-division standing.

#### **GRG 323K. Geography of South America.**

Same as Latin American Studies 330 (Topic 3: Geography of South America). Ecological, cultural, and political challenges of the densely populated margins and sparsely populated interior frontier of South America; appropriate development and conservation pathways. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**GRG 325. Geography of Texas.**

Texas as an environmental and cultural borderland: as a transition zone between plains and mountains, humid and arid, South and West, Anglo-America and Latin America. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**GRG 326. Regions and Cultures of Europe.**

Spatial patterns in Europe, with emphasis on cultural, historical, and political geography. Three lecture hours a week for one semester. Only one of the following may be counted: Geography 326; 385 (Topic: Regions and Cultures of Europe); Russian, East European, and Eurasian Studies 345 (Topic 2: Regions and Cultures of Europe). Prerequisite: Upper-division standing.

**GRG 327. Geography of the Former Soviet Union.**

Same as Russian, East European, and Eurasian Studies 345 (Topic 4: Geography of the Former Soviet Union). A systematic introduction to cultural, physical, political, and economic geography of the former Soviet Union. Focus on the fundamental transformation that the former Socialist Union Republics, now sovereign states, have undergone since 1991. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**GRG 328. Geography of the Middle East.**

Same as Middle Eastern Studies 341 (Topic 1: Geography of the Middle East). Major elements of physical and social environment in the region extending from Egypt to Afghanistan. Three lecture hours a week for one semester. Only one of the following may be counted: Geography 328, Middle Eastern Studies 322K (Topic 3: Geography of the Middle East), 341 (Topic 1). Prerequisite: Upper-division standing.

**GRG 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Geography.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Geography and the Environment. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**GRG 331. Geography of Asia.**

Natural regions and cultural landscapes of Asia, excluding the former Soviet Union. Three lecture hours a week for one semester. Asian Studies 331 and Geography 331 may not both be counted. Prerequisite: Upper-division standing.

**GRG 331K. Cultural Ecology.**

Same as Anthropology 324L (Topic 17: Cultural Ecology). Long-term patterns and processes of conversion of planet Earth to the human home, including the emergence of humans, the achievement of control over the food supply, the emergence of civilizations, and globalization. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**GRG 333C. Severe and Unusual Weather.**

In-depth discussion of inclement weather phenomena (tornadoes, tropical cyclones, floods, drought) and their effects on human beings, as well as the climatology of those types of weather events. Three lecture hours a week for one semester, with additional field hours to be arranged. Prerequisite: Geography 301K.

**GRG 333K. Climate Change.**

Examines changes in climatic systems over both short and long time periods in relation to impacts on physical and ecological systems. Discusses past, present, and future changes in climatic conditions and the methods used to make those evaluations. Three lecture hours a week for one semester. Geography 333K and 356T (Topic: Climate Change) may not both be counted. Prerequisite: Upper-division standing and Geography 301C or 301K.

**GRG 334. Conservation, Resources, and Technology.**

Analysis of the relationship between the human population and its resource base, with particular emphasis on current problems in environmental resource management. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**GRG 334C. Environmental Hazards.**

Earth science processes that affect human activities: soil, erosion, flooding, slope stability, earthquakes, volcanism, and water resources and quality. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**GRG 334K. Soils.**

Morphology, genesis, properties, and distribution of world soils. Factors of soil formation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and six semester hours of coursework in physical geography or one or more of the geological or natural sciences, or the equivalent.

**GRG 335C. Quaternary Landscapes.**

Changing physical and biotic landscapes on the Ice Age earth during the last two million years. Reconstruction of Quaternary geomorphic landscapes based on principles and applications of geochronology and paleoclimatology. Three lecture hours a week for one semester. Geography 335C and 385C may not both be counted. Prerequisite: Upper-division standing and Geography 301C.

**GRG 335K. Mountain Geocology.**

Geological evolution of mountains. Physical geography of mountains: climates, soils, vegetation, landforms and geomorphic processes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of coursework in physical geography or one or more of the geological or natural sciences.

**GRG 335N. Landscape Ecology.**

The study of spatial patterns in the earth's biosphere found within landscapes, typically areas measured in square kilometers. Examines the processes that create those patterns, drawing from ecology, biogeography, and many other disciplines. Also explores the practical applications of landscape ecology to the study of natural environments and those managed or altered by human activities. Three lecture hours a week for one semester. Geography 335N and 356T (Topic: Landscape Ecology) may not both be counted. Prerequisite: Upper-division standing and three semester hours of coursework in physical geography or one of the geological or natural sciences.

**GRG 336. Contemporary Cultural Geography.**

Recent theoretical developments in cultural geography, with a focus on landscapes and the everyday practices that imbue them with meaning; the ways those meanings are contested and are the foci of struggle; and how the relationship between culture and space plays a central role in the social construction of identity. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.



### **GRG 336C. National Parks and Protected Areas.**

The history, purpose, and meaning of national parks (and preserves, refuges, and other publicly protected natural areas), from their inception at Yellowstone in 1872 to their present global distribution. Emphasis is on key management issues and dilemmas in the parks today; and the adoption and modification of Western notions of nature preservation within non-Western cultural settings. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 337. The Modern American City.**

Same as Architecture 350R (Topic 1: The Modern American City) and Urban Studies 352 (Topic 1: The Modern American City). Issues facing residents of United States cities, such as transportation and housing, poverty and crime, metropolitan finance, environmental and architectural design; historical/comparative urban evolution. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 338C. Rivers and Landscapes: Fluvial Geomorphology.**

Drainage basin evolution and channel adjustment, variability of river systems in differing geomorphic regimes, relationships between fluvial systems and other components of physical geography, and the role of humans as geomorphic agents. Three lecture hours a week for one semester, with additional field hours to be arranged. Prerequisite: Upper-division standing; and Geography 301C or Geological Sciences 401, or the equivalent.

### **GRG 339. Process Geomorphology.**

Analysis of geomorphic processes and their effects on landform development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and credit or registration for Geography 301C or Geological Sciences 401.

### **GRG 339C. Principles of Environmental Conservation.**

Environmental conservation issues, focusing on the factors that control the production and consumption of environment-based resources. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 339K. Environment, Development, and Food Production.**

Assessment of various types of agriculture with regard to environmental factors and management techniques. Three lecture hours a week for one semester. Geography 339K and 390S may not both be counted. Prerequisite: Upper-division standing.

### **GRG 340D. Political Ecology of Globalization and Environmental Degradation.**

Study of current environmental problems from the perspective of political ecology, which critically examines political, economic, and social relations between humans and the natural world. Uses case studies from Africa, Latin America, Asia, and the Middle East to address climate change, deforestation, desertification, biodiversity, and environmental justice. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 341K. Landscapes of Mexico and Caribbean America.**

Same as Latin American Studies 330 (Topic 2: Landscapes of Mexico and Caribbean America). The natural regions and cultural landscapes

of Mexico, Central America, and the West Indies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 342C. Sustainable Development.**

Historical and contemporary analysis of international development with a focus on the prospects for environmental sustainability. Three lecture hours a week for one semester. Asian Studies 342C and Geography 342C may not both be counted. Prerequisite: Upper-division standing.

### **GRG 344K. Global Food, Farming, and Hunger.**

Examination of contemporary transformations in global agro-food systems, with emphasis on the current paradox of epidemic obesity in some parts of the world and enduring hunger in others. Three lecture hours a week for one semester. Geography 344K and 356T (Topic: Farming, Food, and Global Hunger) may not both be counted. Prerequisite: Upper-division standing.

### **GRG 346. The Human Use of the Earth.**

The state of the world from an ecological perspective. Case studies are drawn from a wide range of ecological settings and involve both traditional and modern societies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 348C. Geography of South Asia.**

Same as Asian Studies 348C. Natural regions and cultural landscapes of South Asia. Agriculture, urban structure, issues of environment and development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 350K. Geographies of Globalization.**

Examines the process of globalization by theoretically and empirically analyzing the rise of capitalism and industrial modernity, its evolution into a global system through methods such as colonization and free-trade imperialism, and its metamorphosis into the postmodern cultural, economic and political process known as globalization. Three lecture hours a week for one semester. Geography 350K and 356T (Topic: Introduction to Globalization) may not both be counted.

### **GRG 356. Topics in Environmental Geography.**

Topics include environmental assessment methods and techniques, the conservation movement, and climate and people. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **GRG 356C. Geo-Archaeology and Environmental History.**

Long-term ecology as reconstructed from settlement and land-use histories. Empirical case studies in environmental history from the Mediterranean region, the Near East, and Mesoamerica. Applications to degradation, desertification, sustainability, and global change. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 382N, Geography 356C, 382K. Prerequisite: Upper-division standing.

### **GRG 356T, 456T. Topics in Geography.**

Three or four lecture hours a week for one semester. Some topics may require additional field trips; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The Culture of Cities.** Geography 356T (Topic 1) is same as American Studies 370 (Topic 13: The Culture of Cities) and Urban Studies 354 (Topic 4: The Culture of Cities). Examines the social, geographical, and cultural evolution of the United States from

a rural and small-town society to an urban and suburban nation. Subjects may include the segregation of public and private space; the formation of urban subcultures organized by gender, work, race, religion, and sexuality; social and spatial divisions between rich and poor and native-born and immigrant; and the increasing importance of "cultural capital" in reshaping urban politics and in conflicts over revitalization and gentrification. Prerequisite: Upper-division standing.

**Topic 2: Memory and Place.** Geography 356T (Topic 2) is same as American Studies 370 (Topic 23: Memory and Place). Explores how cultural memory is produced in its various forms, from memorials, public art, and commodities to popular culture, rituals, and museums, and how public remembering is inevitably anchored in specific geographic places. Prerequisite: Upper-division standing.

**Topic 3: Geographical Information Systems and Remote Sensing for Archaeology and Paleontology.** Geography 356T (Topic 3) is same as Anthropology 324L (Topic 33: Geographical Information Systems and Remote Sensing for Archaeology and Paleontology). Designed to give students interested in the fields of archaeology, physical anthropology, and paleontology a foundation in the use of geographical information systems (GIS) and the analysis of remotely sensed data from satellites and aerial photographs. Prerequisite: Upper-division standing.

### **GRG 357. Medical Geography.**

The geographic distribution, expansion, and contraction of the infectious diseases that have the greatest influence in shaping human societies today: malaria, AIDS, and others. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 358. Cities in Developing Countries.**

Comparative analysis of demographic, social, economic, and political features of cities in Latin America, the Middle East, Asia, and Africa; emphasis on regional imbalance, migration, occupational and social stratification, housing the poor, and suburbanization. Possibilities for individual research. Three lecture hours a week for one semester. Asian Studies 358 and Geography 358 may not both be counted. Prerequisite: Upper-division standing.

### **GRG 358E. Geography and Religion.**

Same as Humanities 350 (Topic 3: Geography and Religion). Ideas about the relationships among the natural world, myth, and ritual; principal focus on Christianity, Islam, and Judaism and their offshoots and antagonists in the Western world. Three lecture hours a week for one semester. Only one of the following may be counted: Geography 358E, Humanities 350 (Topic 3), Middle Eastern Studies 322K (Topic 15: Geography and Religion). Prerequisite: Upper-division standing.

### **GRG 460C. The Geographer's Craft.**

A comprehensive introductory survey of research techniques used in contemporary geography. The course uses the problem-solving approach to teach technical skills and concepts drawn from cartography, remote sensing, geographical information systems, spatial statistics, and maps and map interpretation. Three lecture hours and one and one-half laboratory hours a week for one semester.

### **GRG 360G. Environmental Geographic Information Systems.**

An introduction to the creation and use of geographic information systems. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Geography 310C.

### **GRG 360L. Spatial Analysis.**

Application of statistical techniques to spatial problems: research and experimental design, hypothesis testing and sampling, with reference to spatial patterns and areal associations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 462K. Introduction to Remote Sensing of the Environment.**

The use of electromagnetic energy to sense objects in the natural environment; interpretation and recognition of patterns detected by sensors. Three lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Upper-division standing.

### **GRG 464K. Advanced Remote Sensing and Pattern Analysis.**

Advanced classification techniques for satellite image processing and landscape pattern analysis. Three lecture hours and one and one-half discussion hours a week for one semester. Geography 356 (Topic: Advanced Remote Sensing and Pattern Analysis) and 464K may not both be counted. Prerequisite: Upper-division standing, and Geography 462K or the equivalent or consent of instructor.

### **GRG 366C. Comparative Ecosystems.**

The important ecosystem processes that affect the distributions, characteristics, and management of natural environments at landscape, regional, and continental scales. Ecosystem functions, including nutrient cycling, water balance, and the role of natural disturbances in a wide range of ecosystems, from the tundra to the rain forests and grasslands of the tropics. Three lecture hours a week for one semester. Geography 356T (Topic: Comparative Ecosystems) and 366C may not both be counted. Prerequisite: Upper-division standing and three semester hours of coursework in physical geography or one of the geological or natural sciences.

### **GRG 366K. Biogeography.**

Contemporary patterns of plant and animal distribution, and the environmental and historical processes affecting them. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and three semester hours of coursework in physical geography or one of the geological or natural sciences.

### **GRG 367K. Vegetation Ecology.**

Plant autecology and synecology. Ecological factors and processes of plant communities. Vegetation geocology, succession, and dynamics. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of coursework in physical geography or one or more of the geological or natural sciences.

### **GRG 368C. Spatial Analysis and Geographic Information Systems.**

Addresses spatial problem solving by focusing on both the theoretical/conceptual and practical aspects of geographic information systems modeling. Describes geographic information systems techniques and spatial statistics used to quantify and measure spatial patterns. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and credit or registration for Geography 360G.

### **GRG 470C. Advanced Geographic Information Systems.**

Study of methods of spatial analysis, design and implementation of a geographic information system, vector and raster modeling, and advanced applications of geographic information systems. Three

lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Geography 360G and consent of instructor.

### **GRG 373F. Field Techniques.**

Introduction to the collection and mapping of environmental and cultural data, involving both classroom lectures and outdoor exercises. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, a major in geography, and consent of instructor.

### **GRG 373K. Field Methods for Landscape Characterization.**

The design of research questions and the acquisition of data for the characterization of landscapes. Utilizes geographical and ecological field-based methods. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Geography 301C or the equivalent.

### **GRG 374. Frontiers in Geography.**

Restricted to geography majors and students seeking a secondary school teaching certificate with geography as the second teaching field. Current concerns and methodology in the field of geography; an introduction to theory and research in geography. The equivalent of three lecture hours a week for one semester, with one field trip to be arranged. Prerequisite: Upper-division standing and consent of the undergraduate adviser.

### **GRG 476T. Topics in Geography.**

Three lecture hours and one and one-half laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **GRG 679H. Honors Tutorial Course.**

For honors candidates in geography. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Regular conferences with the faculty supervisor are also required. Conference course for two semesters. Prerequisite: For 679HA, admission to the Geography Honors Program no later than two semesters before expected graduation; for 679HB, Geography 679HA. A University grade point average of at least 3.00 and a grade point average in geography of at least 3.50 are required for admission to the Geography Honors Program.

### **GRG 379K. Conference Course.**

Supervised individual study of selected problems in geography. Conference course. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in one or more of the social, geological, or natural sciences; and consent of instructor.

### **GRG 379L. Practicum: Internships in Applied Geography.**

Research and staff experience working in an appropriate government agency or private business. At least six but no more than nine hours of work a week for one semester. Prerequisite: Completion of at least seventy semester hours of coursework, including twelve semester hours of geography, and consent of the undergraduate adviser.

## **Urban Studies: URB**

### **Lower-Division Courses**

#### **URB 301. Introduction to Urban Studies.**

Same as Geography 307C. A multidisciplinary study of cities and complex urban environments; historical and contemporary issues from

both national and international perspectives. Three lecture hours a week for one semester.

#### **URB 305. Introductory Topics in Urban Studies.**

An introduction to urban studies within the framework of different disciplines. Topics include urban history, urban education, politics and governance, economics, design and planning, and society and culture. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **URB 315. Urban Studies Research Methods.**

An introduction to urban studies research methodologies. Includes sources of urban data, the use of the library in urban research, formulating research questions, research design, methods commonly used in urban research, the use of computers to store and manipulate quantitative urban data, and an introduction to data analysis and theoretical and practical applications of urban research. Three lecture hours a week for one semester. Prerequisite: Mathematics 408C or 408K with a grade of at least C-; Mathematics 316 or Statistics and Scientific Computation 305 with a grade of at least C-; and Urban Studies 301.

### **Upper-Division Courses**

#### **URB 325. Special Topics in Urban Studies.**

Three lecture hours a week for one semester. Additional hours may be required for some topics; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **URB 350. Topics in Urban Politics and Governance.**

The basic political and administrative structures of cities and metropolitan regions, including problems associated with local and regional government. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Urban Politics.** Same as Government 370L (Topic 11: Urban Politics). Prerequisite: Six semester hours of lower-division coursework in government.

#### **URB 351. Topics in Urban Economics.**

Urban economics and the application of economic analysis to urban concerns, including economic development, urbanization, urban form, public finance, and competition. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Development Problems and Policies in Latin America.** Same as Economics 355 and Latin American Studies 355 (Topic 1: Development Problems and Policies in Latin America). Description of the Latin American economy; business and market organization; problem of growth (involving credit, public finance, trade, investment aspects). Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

**Topic 2: Urban Economics.** Same as Economics 334K. Economic analysis of urban areas; emphasis on the nature of current urban problems--slums, transportation, finance--and an evaluation of current policy. Prerequisite: Economics 420K with a grade of at least C-.

**Topic 3: Regional Economics.** Same as Economics 334L. Spatial aspects of economics, including concepts, theories, and policy

applications. Prerequisite: Economics 420K with a grade of at least C-.

### **URB 352. Topics in Urban Design and Planning.**

Issues concerning the built environment and urban infrastructure, environmental sustainability, and the public policy framework designed to manage the challenges presented by these issues. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The Modern American City.** Same as Architecture 350R (Topic 1: The Modern American City) and Geography 337. Issues facing residents of United States cities, such as transportation and housing, poverty and crime, metropolitan finance, environmental and architectural design; historical/comparative urban evolution. Prerequisite: Upper-division standing.

**Topic 2: American Dream: Status Quo and Alternatives.** Same as Architecture 350R (Topic 2: American Dream: Status Quo and Alternatives).

**Topic 3: Urban Design Practice.** Same as Architecture 350R (Topic 3: Urban Design Practice).

**Topic 4: Economy/Value/Quality of Life.** Same as Architecture 350R (Topic 4: Economy/Value/Quality of Life).

**Topic 5: Modernism in American Design and Architecture.** Same as American Studies 330 and Art History 367 (Topic 3: Modernism in American Design and Architecture). A historical survey of artifacts, buildings, and urban environments, focusing on responses to machine-age civilization. Prerequisite: Upper-division standing.

### **URB 353. Topics in Urban History.**

The historical evolution of cities, contemporary urban development trends, and the links between social development and physical form. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: African American History since 1860.** Same as American Studies 321F, African and African Diaspora Studies 357D, and History 357D. Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Only one of the following may be counted: African and African Diaspora Studies 357D, American Studies 321 (Topic: African American History since 1860), 321F, History 357D, Urban Studies 353 (Topic 1). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**Topic 2: Texas, 1914 to the Present.** Same as History 320R and Mexican American Studies 374 (Topic 16: Texas, 1914 to the Present). The steady dissociation of Texas from its Old South status to a transitional state and a power in national politics. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

**Topic 5: Environmental History of North America.** Same as American Studies 329 and History 350R (Topic 7: Environmental History of North America). The history of humanity's influence on the plants, animals, microlife, soils, water, and air of North America, and vice versa, from the arrival of the proto-Indians to the contemporary environmental crisis. Only one of the following may be counted:

American Studies 329, History 350L (Topic 4: Environmental History of North America), 350R (Topic 7), Urban Studies 353 (Topic 5). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

### **URB 354. Topics in Urban Society and Culture.**

Topics on the social and cultural diversity within cities; social policies; and the sociocultural impact of the media and other institutions on urban development. Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Society of Modern Mexico.** Same as Latin American Studies 325 (Topic 1: Society of Modern Mexico) and Sociology 335. Family, community, industrialization, and urbanization in modern Mexico.

**Topic 4: The Culture of Cities.** Same as American Studies 370 (Topic 13: The Culture of Cities) and Geography 356T (Topic 1: The Culture of Cities). Examines the social, geographical, and cultural evolution of the United States from a rural and small-town society to an urban and suburban nation. Subjects may include the segregation of public and private space; the formation of urban subcultures organized by gender, work, race, religion, and sexuality; social and spatial divisions between rich and poor and native-born and immigrant; and the increasing importance of "cultural capital" in reshaping urban politics and in conflicts over revitalization and gentrification. Prerequisite: Upper-division standing.

**Topic 6: The City and Urbanization.** Same as Sociology 346. Examination of urbanization from a cross-national perspective: discrimination and racial inequality in urban labor markets. Prerequisite: Upper-division standing.

**Topic 7: Vienna: Memory and the City.** Same as American Studies 370 (Topic 41: Vienna: Memory and the City), European Studies 346 (Topic 5: Vienna: Memory and the City), and History 362G (Topic 2: Vienna: Memory and the City). Examines the ways in which cultural memory has shaped, and continues to shape, urban life in Vienna, Austria. Only one of the following may be counted: American Studies 315 (Topic: Vienna: Memory and the City), 370 (Topic 41), European Studies 301 (Topic: Vienna: Memory and the City), 306 (Topic: Vienna: Memory and the City), 346 (Topic 5), Geography 309 (Topic: Vienna: Memory and the City), Germanic Civilization 311 (Topic: Vienna: Memory and the City), History 306N (Topic: Vienna: Memory and the City), 362G (Topic 2), Urban Studies 305 (Topic: Vienna: Memory and the City), 354 (Topic 7). Prerequisite: Upper-division standing.

### **URB 360. Internship and Service Learning.**

Internship experience in an urban studies-related public or nonprofit agency. Students have the opportunity to apply the knowledge, theory, and understanding gained from courses in their areas of specialization to urban issues in a professional setting. Includes an academic service-learning component. Approximately five to ten hours a week for one semester. Prerequisite: Urban Studies 301 and 315, and upper-division standing or consent of instructor.

### **URB 370. Senior Project.**

Students identify an urban issue, develop a position paper, and work closely with a faculty adviser on a project. Students may use text or other media (such as video or portfolio) to present their arguments. The equivalent of three lecture hours a week for one semester.



Prerequisite: Upper-division standing, and Urban Studies 301, 315, and 360 with a grade of at least C in each.

### **URB 379. Conference Course.**

Supervised individual study of selected problems in urban studies. Conference course. Prerequisite: Upper-division standing and consent of instructor and the undergraduate adviser.

### **URB 679H. Honors Tutorial Course.**

Directed reading and research or creation of an honors project, followed by the writing of a thesis. Conference course for two semesters. Prerequisite: For 679HA, admission to the Urban Studies Honors Program and consent of the urban studies adviser; for 679HB, Urban Studies 679HA.

## **Department of Germanic Studies**

Students with knowledge of German must take a placement test before registering for a German course. Students with transfer credit are strongly encouraged to take a placement test. The lower-division placement test consists of the SAT Subject Test in German with a listening component, with additional questions from the Department of Germanic Studies. The student may earn credit through this examination for any German language course currently offered; the examination also helps the student and the adviser determine with which course the student should begin the study of German at the University. Credit for German 328, and 330C or 331L, may also be earned by special examination. Information about these tests is available from the departmental undergraduate adviser and from the Center for Teaching and Learning, 2616 Wichita.

A student with no knowledge of German may take any beginning German language course. Graduate students preparing for the doctoral reading examination may take German 301.

Before enrolling for the first time in any other language offered in the Department of Germanic Studies, all students with knowledge of that language, however acquired, must be tested to determine the course for which they should register. Information about placement tests is available from the departmental undergraduate adviser.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Danish: DAN**

### **Lower-Division Courses**

#### **DAN 604. Accelerated First-Year Danish.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

#### **DAN 612. Accelerated Second-Year Danish.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Danish 604 or an appropriate score on the placement test.

#### **DAN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Danish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **DAN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Danish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Dutch: DCH**

### **Lower-Division Courses**

#### **DCH 604. Accelerated First-Year Dutch.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

#### **DCH 612. Accelerated Second-Year Dutch.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Dutch 604 or an appropriate score on the placement test.

#### **DCH 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Dutch.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **DCH 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Dutch.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **DCH 375. Studies in Dutch Literature.**

Selected topics in Dutch and Flemish literature. Conducted in Dutch. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Dutch 612 or the equivalent, and consent of instructor.

### **DCH 379. Conference Course in Dutch Language or Literature.**

Supervised individual study of selected problems in Dutch language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

## **German: GER**

### **Lower-Division Courses**

#### **GER 301. German for Graduate Students in Other Departments.**

No auditors. Beginning reading course for students preparing to fulfill language requirement for advanced degrees. Emphasis on grammar, vocabulary, and translation. Three lecture hours a week for one semester. May not be used to fulfill the undergraduate foreign language requirement. Offered on the credit/no credit basis only. Prerequisite: Graduate standing.

#### **GER 601C. Beginning German.**

Not open to native speakers of German. An introduction to the German language and the cultures of the German-speaking countries. Focuses on development of vocabulary, grammatical knowledge, reading, writing, listening, and speaking abilities in a contemporary cultural context. Six lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 506. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K.

#### **GER 604. Accelerated First-Year German.**

Covers the same material as German 506 and 507. Six lecture hours a week for one semester, with optional laboratory available. Only one of the following may be counted: German 601C, 604, 506. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

#### **GER 305. German for Graduate Students in Other Departments.**

No auditors. Advanced reading. Emphasis on grammar, vocabulary, and translation. Three lecture hours a week for one semester. Fulfills the foreign language requirement for the Doctor of Philosophy degree in some departments. May not be used to fulfill the undergraduate foreign language requirement. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and German 301 or equivalent knowledge.

#### **GER 506 (TCCN: GERM 1511). First-Year German I.**

Basic training in grammatical patterns and usage of modern German. Five lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 506.

#### **GER 507 (TCCN: GERM 1512). First-Year German II.**

Advanced training in grammatical patterns and usage of modern German. Five lecture hours a week for one semester. Only one of

the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: German 506 with a grade of at least C.

#### **GER 507R. Intensive First-Year German II.**

German 507R covers the same material as 507 but is offered only in the spring as part of the Intensive German Program. Students in this program must take German 507R, 312R, and 312S during the same spring semester; they must register for all three courses at or before the beginning of the semester and must earn a grade of at least C in each course to take the next course in the sequence. Credit is given for each course in the sequence only if the student completes the entire sequence. The Intensive German Program meets for eleven hours a week for one semester. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: Completion in residence of German 506 and consent of the undergraduate adviser.

#### **GER 508K. Alternate First-Year German II.**

Reviews grammar, pronunciation, and reading skills; for students with beginning preparation below the average provided by German 506. Five lecture hours a week for one semester. Only one of the following may be counted: German 601C, 604, 507, 507R, 508K. Prerequisite: Two high school units of German or transfer credit for German 506, and appropriate score on the placement test.

#### **GER 310. Conversation and Composition.**

Conducted in German. Intended to develop the ability to use German correctly and idiomatically in conversation and in compositions of gradually increasing difficulty. Three class hours a week for one semester. Fulfills fourth-semester language proficiency requirement. Prerequisite: German 312K or 312V with a grade of at least C. With consent of the German undergraduate adviser, may be taken concurrently with German 312K or 312V.

#### **GER 611C. Intermediate German.**

Not open to native speakers of German. Continuation of German 601C. Development of vocabulary, grammatical knowledge, and reading, writing, listening, and speaking abilities in a contemporary cultural context. Six lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 601C, 604, 507, or 508K with a grade of at least C.

#### **GER 612. Accelerated Second-Year German: Readings in Modern German.**

Grammar review, composition, readings and recitation, discussion of literary works, and German culture. Six lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 604, 507, or 508K with a grade of at least C.

#### **GER 312K (TCCN: GERM 2311). Second-Year German I: Readings in Humanities and Social Sciences.**

Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Prerequisite: German 604, 507, or 508K with a grade of at least C.

**GER 312L (TCCN: GERM 2312). Second-Year German II: Readings in Humanities and Social Sciences.**

Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 312K or 312V with a grade of at least C.

**GER 312R. Intensive Second-Year German: Oral and Written Expression and Reading Skill.**

German 312R covers the same material as 312K but is offered only in the spring as part of the Intensive German Program. Students in this program must take German 507R, 312R, and 312S during the same spring semester; they must register for all three courses at or before the beginning of the semester and must earn a grade of at least C in each course to take the next course in the sequence. Credit is given for each course in the sequence only if the student completes the entire sequence. The Intensive German Program meets for eleven hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Prerequisite: Completion in residence of German 506 and consent of the undergraduate adviser.

**GER 312S. Intensive Second-Year German II: Readings in Humanities and Social Sciences.**

German 312S covers the same material as 312L but is offered only in the spring as part of the Intensive German Program. Students in this program must take German 507R, 312R, and 312S during the same spring semester; they must register for all three courses at or before the beginning of the semester and must earn a grade of at least C in each course to take the next course in the sequence. Credit is given for each course in the sequence only if the student completes the entire sequence. The Intensive German Program meets for eleven hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: Completion in residence of German 506 and consent of the undergraduate adviser.

**GER 312V. Second-Year German I: Business German.**

German 312V covers the same material as 312K, but with readings, discussions, and exercises that focus on the business world. Emphasis on practical, career-oriented competence. Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312K, 312R, 312V. Prerequisite: German 604, 507, or 508K with a grade of at least C.

**GER 312W. Second-Year German II: Business German.**

German 312W covers the same material as 312L, but with readings, discussions, and exercises that focus on the business world. Emphasis on practical, career-oriented competence. Three lecture hours a week for one semester. Only one of the following may be counted: German 611C, 612, 312L, 312S, 312W. Prerequisite: German 312K or 312V with a grade of at least C.

**GER 317C. Advanced Intermediate German.**

Not open to native speakers of German. Designed to prepare students with credit for German 611C for upper-division German language courses. Special focus on text and media literacy, advanced oral language practice, debate and writing, and accuracy. Three lecture hours a week for one semester. Prerequisite: German 611C with a grade of at least C.

**GER 118C, 218C. Practice in Spoken German.**

Conducted in German. Recommended for all German majors. For each semester hour of credit earned, one class hour a week for one semester. May not be counted toward a German major or minor. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit. Prerequisite: German 310, 312L, 612, or the equivalent with a grade of at least C.

**GER 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in German.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses**

**GER 328. Advanced German Grammar.**

Description of German sounds, grammatical structures, pronunciation, word formation. Three lecture hours a week for one semester. Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.

**GER 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in German.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded to work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**GER 330C. Advanced Conversation and Composition: Culture.**

German cultural material from print and visual media provides the basis for advanced conversation and composition, with considerable practice in the writing of short essays in German. Three lecture hours a week for one semester. Only one of the following may be counted: German 330C or 331L. Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.

**GER 130D. German across Disciplines.**

Students read and discuss German language materials related to the subject matter of another designated course. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

**GER 331L. Advanced Conversation and Composition: Literature.**

German literary material from print and visual media provides the basis for advanced conversation and composition, with considerable practice in the writing of short essays in German. Three lecture hours a week for one semester. Only one of the following may be counted: German 330C or 331L. Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.

### **GER 336W. Advanced Business German I.**

Development of proficiency through readings, discussions, and assignments based on materials dealing with the German economic system and Germany's role in international trade. Emphasis on practical, job-related competence in business German. Taught in German. Three lecture hours a week for one semester. Normally meets with International Business 372 (Topic 7: Advanced Business German). Only one of the following may be counted: German 336W, or International Business 372 (Topic 7: Advanced Business German). Prerequisite: German 310, 612, 312L, 312S, 312W, or 317C with a grade of at least C.

### **GER 340C. Historical Backgrounds of German Civilization.**

Cultural, social, and literary history of German-speaking Europe of the Middle Ages. Studies humanism, the Reformation, absolutism, and the early Enlightenment (between 1200 and 1750). Taught in German. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

### **GER 343C. Contemporary German Civilization.**

Cultural, social, and literary history of Germany between 1900 and reunification. Taught in German. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

### **GER 345L. German Literature between the Beginnings and the Baroque.**

Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in German.

### **GER 346L. German Literature between the Enlightenment and the Present.**

Cultural, social, and literary history of German-speaking Europe between 1750 and 1900. Taught in German. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

### **GER 347L. Language and Society in the German-speaking Countries.**

Uses language and linguistics to study the culture and society of the German-speaking countries. Taught in German. Three lecture hours a week for one semester. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

### **GER 348D. German Play: Student Production.**

Discussion, staging, and production of a German play. Three hours of lecture or laboratory a week for one semester. Prerequisite: German 310, 612, 312L, or the equivalent with a grade of at least C.

### **GER 149T, 249T, 349T. Introduction to Teaching German.**

Supervised individual instruction designed to offer students an introduction to principles of foreign language education and the opportunity to teach German in local elementary schools. Weekly class meetings for four weeks, followed by one, two, or three student teaching hours a week for eight weeks. Additional class meetings may also be required. May be repeated for credit, but no more than three semester hours may be counted toward a degree in the College of Liberal Arts. May not be counted toward a major in German. Prerequisite: Credit or registration for German 312L or the equivalent.

### **GER 356W. Advanced Business German II.**

Readings, discussions, and assignments based on material dealing with key areas of German business such as management and corporate hierarchies. Preparation for the German Certificate for Professional Purposes. Recommended for students planning a career in international business. Taught in German. Three lecture hours a week for one semester. German 356W and International Business 372 (Topic 6: Business German) may not both be counted. Prerequisite: Three semester hours of upper-division coursework in German with a grade of at least C.

### **GER 363K. Topics in German Culture.**

Study of selected aspects of Germanic civilization, such as science and philosophy, fine arts, film, history, social institutions. Conducted in German. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in German.

### **GER 366K. Practicum in German Stylistics.**

Three lecture hours a week for one semester. Prerequisite: German 328 (or 356), and three additional semester hours of upper-division coursework in German.

### **GER 369. Topics in Germanic Languages.**

Introduction to the phonology, morphology, syntax, dialectology, or lexicography of individual Germanic languages. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics

**Topic 1: The Structure of the German Language.** German 369 (Topic 1) and Linguistics 373 (Topic 6: The Structure of the German Language) may not both be counted.

**Topic 4: The German Language: Historical Perspectives.** Same as Anthropology 320L (Topic 9: The German Language: Historical Perspectives), Classical Civilization 348 (Topic 9: The German Language: Historical Perspectives), and Linguistics 373 (Topic 9: The German Language: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8: German and English: Historical Perspectives), 320L (Topic 9), Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), 348 (Topic 9), German 369 (Topic 4), Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives), Linguistics 373 (Topic 8: German and English: Historical Perspectives), 373 (Topic 9). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.

**Topic 7: Translation I.**

**Topic 8: Translation II.**

### **GER 373. Topics in Germanic Literature.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in German.

**Topic 1: German Short Prose.** The linguistic, stylistic, and thematic varieties of short prose (anecdotes, meditations, fables, parables, reports, impressions, and sketches) seen through translation, critical discussion, and literary-historical contextualization.

**Topic 2: German Folktale and Fantasy Tale.**



### **GER 179, 279, 379. Conference Course in Germanic Language or Literature.**

Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Germanic languages or literature. Conference course. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in German.

### **GER 679H. Honors Tutorial Course.**

Supervised individual research on a literary or linguistic problem, culminating in an honors paper of some length. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing, six semester hours of upper-division German, a University grade point average of at least 3.00, a grade point average in German of at least 3.50, and admission to the Germanic Studies Honors Program; for 679HB, German 679HA.

## **Germanic Civilization: GRC**

### **Lower-Division Courses**

#### **GRC 301. Introductory Topics in Germanic Civilization.**

Introduction to Germanic literary and cultural history. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **GRC 311. Topics in Germanic Literature and Culture.**

Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

##### **Topic 2: Movies Go To War, from World War I to Vietnam.**

Same as American Studies 315C. Only one of the following may be counted: American Studies 315 (Topic: Movies Go To War, World War I to Vietnam), 315C, Germanic Civilization 311 (Topic 2), Science, Technology, and Society 311 (Topic: Movies Go To War, World War I to Vietnam).

#### **GRC 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Germanic Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies course. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **GRC 323E. Germanic Literature in Translation.**

Outstanding works of Germanic literature in cultural-historical perspective. Topics include medieval literature, the Renaissance, classicism, realism, modernism, exemplary writers, and genres. Taught in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Isak Dinesen/Karen Blixen.** Same as Scandinavian 373 (Topic 6: Isak Dinesen/Karen Blixen) and Women's and Gender Studies 345 (Topic 13: Isak Dinesen/Karen Blixen).

**Topic 2: Medieval German Chivalric Romance.**

**Topic 3: Twentieth-Century German Shorter Prose.**

**Topic 4: Hans Christian Andersen.** Same as Scandinavian 373 (Topic 4: Hans Christian Andersen). Only one of the following may be counted: English 322 (Topic 19: Hans Christian Andersen), Germanic Civilization 323E (Topic 4), Scandinavian 373 (Topic 4).

**Topic 5: The Detective/Crime Story in German, English, and American Tradition.** English 322 (Topic 35: The Detective/Crime Story in German, English, and American Tradition) and Germanic Civilization 323E (Topic 5) may not both be counted.

#### **GRC 327E. Topics in Germanic Civilization.**

Examination of the broad spectrum of social and political life in sociohistorical perspective; and an introduction to the lifestyle of the cultures investigated. Taught in English. Three lecture hours a week for one semester; additional hours may be required for some topics. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Freud's Vienna.** European Studies 361 (Topic 5: Freud's Vienna) and Germanic Civilization 327E (Topic 2) may not both be counted. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing or consent of instructor.

**Topic 3: Sociolinguistics of German-Speaking Society.** Same as Linguistics 373 (Topic 5: Sociolinguistics of German-Speaking Society). Prerequisite: Upper-division standing or consent of instructor.

**Topic 4: Medieval Life and Thought.** European Studies 361 (Topic 18: Medieval Life and Thought) and Germanic Civilization 327E (Topic 4) may not both be counted. Prerequisite: Upper-division standing or consent of instructor.

**Topic 5: Johann Sebastian Bach and His Work.** The life and work of Johann Sebastian Bach (1685-1750), examined from a number of perspectives. Prerequisite: For music majors, Music 302L or consent of instructor; for others, upper-division standing.

**Topic 6: Renaissance Literature and Art.** Introduction to Renaissance culture and exploration of links between art and literature during the sixteenth-century Renaissance and Reformation in Germany. Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 7: German Cultural History.** Restricted to students enrolled in the University of Wuerzburg Summer Program. Excursions, library research, and exposure to a German viewpoint on contemporary European affairs. The equivalent of four lecture hours a week for one semester. Taught in Wuerzburg, Germany.

**Topic 9: German and English: Historical Perspectives.** Same as Anthropology 320L (Topic 8: German and English: Historical Perspectives), Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), and Linguistics 373 (Topic 8: German and English: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8), 320L (Topic 9: The German Language: Historical Perspectives), Classical Civilization 348 (Topic 8), 348 (Topic 9: The German Language: Historical Perspectives), German 369 (Topic 4: The German

Language: Historical Perspectives), Germanic Civilization 327E (Topic 9), Linguistics 373 (Topic 8), 373 (Topic 9: The German Language: Historical Perspectives). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

**Topic 10: Birgitta, Hildegard, and Margery.** Same as Scandinavian 373 (Topic 8: Birgitta, Hildegard, and Margery). Only one of the following may be counted: English 322 (Topic: Birgitta, Hildegard, and Margery), European Studies 361 (Topic: Birgitta, Hildegard, and Margery), Germanic Civilization 327E (Topic 10), Religious Studies 357 (Topic: Birgitta, Hildegard, and Margery), Scandinavian 373 (Topic 4), Women's and Gender Studies 340 (Topic: Birgitta, Hildegard, and Margery).

**Topic 11: Language, Culture, and the Texas German**

**Experience.** Only one of the following may be counted: American Studies 370 (Topic: Language, Culture, and the Texas German Experience), Anthropology 324L (Topic: Language, Culture, and the Texas German Experience), Germanic Civilization 327E (Topic 11), Linguistics 350 (Topic: Language, Culture, and the Texas German Experience). Prerequisite: Upper-division standing.

**Topic 12: Midnight Sun People: The Sami.** Same as Religious Studies 357 (Topic 4: Midnight Sun People: The Sami) and Scandinavian 327 (Topic 10: Midnight Sun People: The Sami). Only one of the following may be counted: Anthropology 324L (Topic: Midnight Sun People), English 322 (Topic: Midnight Sun People), Germanic Civilization 327E (Topic 12), Religious Studies 357 (Topic 4), Scandinavian 327 (Topic 10).

**GRC 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Germanic Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**GRC 332. Preparation for Work and Study Abroad.**

Open to students of all languages who are interested in working or studying abroad. Preparation for the cross-cultural experience of international exchange and the problems that may occur in adjusting to a new culture, host family, or work or study abroad situation. Taught in English. Three lecture hours a week for one semester. May not be counted toward a German major or minor. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Consent of instructor.

**GRC 340E. Introduction to Germanic Civilization.**

Examination of the early Germanic peoples, their myths, religions, migrations, from a cultural and historical perspective. Taught in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Introduction to Germanic Religion and Myth.** Same as European Studies 347 (Topic 3: Introduction to Germanic Religion and Myth) and Religious Studies 365 (Topic 2: Introduction to Germanic Religion and Myth). Only one of the following may be counted: English 322 (Topic 2: Introduction to Germanic

Religion and Myth), European Studies 347 (Topic 3), 361 (Topic 6: Introduction to Germanic Religion and Myth), Germanic Civilization 340E (Topic 1). Prerequisite: Upper-division standing.

**GRC 360E. Seminar in Politics and Culture.**

Analysis of specific aspects of German, Swiss, Austrian, Netherlandic, and/or Scandinavian historical, political, sociological, and intellectual development. Taught in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Reformation Theology.** Same as History 362G (Topic 1: Reformation Theology) and Religious Studies 355D. Prerequisite: Upper-division standing.

**Topic 2: Cultural Politics of Kant and Hegel.** Same as Philosophy 365 (Topic 3: Cultural Politics of Kant and Hegel). Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 3: German Nationalisms.** Same as Government 365N (Topic 6: German Nationalisms). German national movements within their historical context, and the present-day implications of nationalism. Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

**Topic 5: Switzerland and Europe: Integration or Isolation.** Same as Government 365N (Topic 8: Switzerland and Europe: Integration or Isolation). Culture, society, history, economics, and politics in historical and contemporary Switzerland. Only one of the following may be counted: Germanic Civilization 360E (Topic: Switzerland: Seven Hundred Years), 360E (Topic 5), Government 365N (Topic: Switzerland: Seven Hundred Years), 365N (Topic 8). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

**GRC 361E. Cinema and Society.**

History and aesthetics of Germanic-language films related to Germanic and world cultural movements. Selected films shown and discussed. Taught in English. Three lecture hours a week for one semester. May be repeated once for credit when the topics vary. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: German Cinema through 1932.** Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 2: German Cinema since 1933.** Same as European Studies 347 (Topic 2: German Cinema since 1933). Only one of the following may be counted: English 322 (Topic 12: German Cinema since 1933), European Studies 347 (Topic 2), 361 (Topic 17: German Cinema since 1933), Germanic Civilization 361E (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Genres, Structure, and Trends in German Cinema.** Same as European Studies 347 (Topic 5: Genres, Structure, and Trends in German Cinema). Only one of the following may be counted: English 322 (Topic 13: Genres, Structure, and Trends

in German Cinema), European Studies 347 (Topic 5), 361 (Topic 2: Genres, Structure, and Trends in German Cinema), Germanic Civilization 361E (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: Literature in the New German Cinema.** Same as European Studies 347 (Topic 4: Literature in the New German Cinema). Only one of the following may be counted: European Studies 347 (Topic 4), 361 (Topic 1: Literature in the New German Cinema), Germanic Civilization 361E (Topic 3). Prerequisite: Upper-division standing.

**Topic 5: German Women Filmmakers.** Same as Women's and Gender Studies 340 (Topic 5: German Women Filmmakers). Only one of the following may be counted: English 322 (Topic 14: German Women Filmmakers), European Studies 361 (Topic 15: German Women Filmmakers), Germanic Civilization 361E (Topic 5), Women's and Gender Studies 340 (Topic 5). Prerequisite: Upper-division standing.

### **GRC 362E. Topics in Germanic Studies.**

Introduction to methodologies and area concentrations, such as feminist criticism and literary criticism, in the field of Germanic studies. Taught in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in German. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Freudians and Feminisms.** Same as Philosophy 365 (Topic 1: Freudians and Feminisms) and Women's and Gender Studies 345 (Topic 10: Freudians and Feminisms). Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 2: Wagner's Ring of the Nibelung.** English 322 (Topic 15: Wagner's Ring of the Nibelung) and Germanic Civilization 362E (Topic 2) may not both be counted. Prerequisite: Upper-division standing.

**Topic 3: The German Folktale and Fantasy Tale.** Same as European Studies 347 (Topic 6: The German Folktale and Fantasy Tale). Only one of the following may be counted: English 322 (Topic 30: The German Folktale and Fantasy Tale), European Studies 347 (Topic 6), 361 (Topic 16: The German Folktale and Fantasy Tale), Germanic Civilization 362E (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: Freud and Lacan, with Kristeva.** Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

### **GRC 179, 279, 379. Conference Course in Germanic Civilization.**

Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Germanic civilization. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

## **Norwegian: NOR**

### **Lower-Division Courses**

#### **NOR 604. Accelerated First-Year Norwegian.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

#### **NOR 612. Accelerated Second-Year Norwegian.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Norwegian 604 or an appropriate score on the placement test.

#### **NOR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Norwegian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser for the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **NOR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Norwegian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Scandinavian: SCA**

### **Lower-Division Courses**

#### **SCA 301. Scandinavian Culture and Civilization.**

Designed to introduce the student to various aspects of Scandinavian life; emphasis on the arts (literature, music, film); includes political and sociological aspects. Conducted in English. Three lecture hours a week for one semester.

#### **SCA 302. Introductory Topics in Scandinavian Studies.**

Open only to lower-division students. Introduction to Scandinavian literary and cultural history. Conducted in English. Three lecture hours a week for one semester. May not be counted by students who took Scandinavian 301 when the subject was European Folktale. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **SCA 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Scandinavian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted



as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### SCA 323. Scandinavian Literature in Translation.

Topics include modern Scandinavian literature and medieval Scandinavian literature. Conducted in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree or toward a German major or minor. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Survey of Scandinavian Drama and Film.**

**Topic 2: Social Dramas of Henrik Ibsen.** Same as English 322 (Topic 17: Social Dramas of Henrik Ibsen) and Women's and Gender Studies 345 (Topic 14: Social Dramas of Henrik Ibsen). Men and women in their public and private lives.

**Topic 3: Women and Literature: European Tradition.** Same as Women's and Gender Studies 321 (Topic 4: Women and Literature: European Tradition).

**Topic 4: Saga, Novel, and Tale.** English 322 (Topic 28: Saga, Novel, and Tale) and Scandinavian 323 (Topic 4) may not both be counted.

### SCA 327. Topics in Scandinavian Culture.

Various aspects of political and cultural development of Scandinavian countries. Conducted in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree or toward a German major or minor. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 9: Films of Ingmar Bergman.** English 322 (Topic 18: Films of Ingmar Bergman) and Scandinavian 327 (Topic 9) may not both be counted. Prerequisite: Upper-division standing.

**Topic 10: Midnight Sun People: The Sami.** Same as Germanic Civilization 327E (Topic 12: Midnight Sun People: The Sami) and Religious Studies 357 (Topic 4: Midnight Sun People: The Sami). Only one of the following may be counted: Anthropology 324L (Topic: Midnight Sun People), English 322 (Topic: Midnight Sun People), Germanic Civilization 327E (Topic 12), Religious Studies 357 (Topic 4), Scandinavian 327 (Topic 10).

### SCA 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Scandinavian.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### SCA 335. Topics in Scandinavian Society.

Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### SCA 358. Forms and Genres of Scandinavian Literature.

Topics include Scandinavian prose, Scandinavian drama, and Scandinavian poetry. Three lecture hours a week for one semester.

May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### SCA 369. Topics in Scandinavian Languages.

Introduction to the phonology, morphology, syntax, dialectology, or lexicography of the Danish, Norwegian, and Swedish languages. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

### SCA 373. Topics in Scandinavian Literature.

Study of selected writers and topics in Scandinavian literature. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree or toward a German major or minor. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 4: Hans Christian Andersen.** Same as Germanic Civilization 323E (Topic 4: Hans Christian Andersen). Only one of the following may be counted: English 322 (Topic 19: Hans Christian Andersen), Germanic Civilization 323E (Topic 4), Scandinavian 373 (Topic 4). Prerequisite: Upper-division standing.

**Topic 6: Isak Dinesen/Karen Blixen.** Same as Germanic Civilization 323E (Topic 1: Isak Dinesen/Karen Blixen) and Women's and Gender Studies 345 (Topic 13: Isak Dinesen/Karen Blixen). Prerequisite: Upper-division standing.

**Topic 8: Birgitta, Hildegard, and Margery.** Same as Germanic Civilization 327E (Topic 10: Birgitta, Hildegard, and Margery). Only one of the following may be counted: English 322 (Topic: Birgitta, Hildegard, and Margery), European Studies 361 (Topic: Birgitta, Hildegard, and Margery), Germanic Civilization 327E (Topic 10), Religious Studies 357 (Topic: Birgitta, Hildegard, and Margery), Scandinavian 373 (Topic 4), Women's and Gender Studies 340 (Topic: Birgitta, Hildegard, and Margery).

### SCA 179, 279, 379. Conference Course in Scandinavian Languages or Literature.

Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Scandinavian language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### SCA 679H. Honors Tutorial Course.

Supervised individual research on a literary or linguistic problem, culminating in an honors paper of some length. Must be taken for special honors in addition to the major requirement. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing, six semester hours of upper-division coursework in Scandinavian or consent of instructor, a University grade point average of at least 3.00, and a grade point average in Scandinavian of at least 3.50; for 679HB, Scandinavian 679HA.

## Swedish: SWE

### Lower-Division Courses

#### SWE 604. Accelerated First-Year Swedish.

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.



### **SWE 612. Accelerated Second-Year Swedish.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Swedish 604 or an appropriate score on the placement test.

### **SWE 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Swedish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer work is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **SWE 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Swedish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Yiddish: YID**

#### **Lower-Division Courses**

##### **YID 604. Accelerated First-Year Yiddish.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Two high school units or the equivalent in another foreign language, or consent of instructor.

##### **YID 612. Accelerated Second-Year Yiddish.**

Six lecture hours a week for one semester, with optional laboratory available. Prerequisite: Yiddish 604 or an appropriate score on the placement test.

##### **YID 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Yiddish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **Upper-Division Courses**

##### **YID 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Yiddish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Germanic Studies. University credit is awarded for work in an exchange program; it may be counted

as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **YID 179, 279, 379. Conference Course in Yiddish Language or Literature.**

Supervised individual instruction course in which students engage in special studies necessary to expand their acquaintance with any subject in Yiddish language or literature. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

## **Department of Government**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Government: GOV**

#### **Lower-Division Courses**

##### **GOV 105. Texas Government.**

A brief survey of the organization and process of Texas government. Topics include the Constitution, political parties, interest groups, elections, branches of government, taxing and spending. The equivalent of one lecture hour a week for one semester.

##### **GOV 310L (TCCN: GOVT 2301). American Government.**

A basic survey of American government, including fundamental political institutions, federal, state, and local; special attention to the United States and Texas Constitutions. Part of a six-semester-hour integrated sequence, the second half of which is Government 312L. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Fulfills first half of legislative requirement for government. Prerequisite: Twelve semester hours of college coursework and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).

##### **GOV 312L (TCCN: GOVT 2302). Issues and Policies in American Government.**

Analysis of varying topics concerned with American political institutions and policies, including the United States Constitution. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Fulfills second half of legislative requirement for government. May be taken for credit only once. Offered on the letter-grade basis only. Prerequisite: Twenty-four semester hours of college coursework, including Government 310L, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).

##### **GOV 312P. Constitutional Principles: Core Texts.**

Close readings from primary texts that have shaped or that reflect deeply upon American democracy, including the Declaration of Independence, The Federalist Papers, and Tocqueville's Democracy in America. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Fulfills second half of legislative requirement for government. Government 312P and 312R may not both be counted. Offered on the letter-grade basis only. Prerequisite:

Twenty-four semester hours of college coursework, including Government 310L, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.

### **GOV 312R. Constitutional Principles: Equality.**

Close readings from primary texts that have shaped or that reflect deeply upon American democracy, including the Declaration of Independence, The Federalist Papers, and Tocqueville's Democracy in America. Special emphasis is given to the issue of equality and the experience or perspectives of one or more underrepresented cultural groups in the United States. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Fulfills second half of legislative requirement for government. Government 312P and 312R may not both be counted. Offered on the letter-grade basis only. Prerequisite: Twenty-four semester hours of college coursework, including Government 310L, and a passing score on the reading section of the Texas Higher Education Assessment (THEA) test.

### **GOV 314. Introductory Topics in Political Science.**

Introduction to varying topics in government and politics. Three lecture hours a week for one semester. Does not fulfill any part of the legislative requirement for government. May be repeated for credit when the topics vary.

#### **Topic 2: American Policy toward Eastern Europe.**

**Topic 3: Introduction to the Middle East: Adjustment and Change in Modern Times.** Same as History 306N (Topic 5: Introduction to the Middle East: Adjustment and Change in Modern Times) and Middle Eastern Studies 301L. The responses of the societies of the Middle East and North Africa (Turkey, Iran, Afghanistan, Israel, and the Arab world) to Western cultural and political challenges, primarily since about 1800.

**Topic 4: Introduction to Russian, East European, and Eurasian Studies: Political Science.** Government 314 (Topic 4) and Russian, East European, and Eurasian Studies 301 may not both be counted.

**Topic 5: Asia's Futures.** Same as Asian Studies 301M (Topic 6: Asia's Futures). Current issues, visible trends, and projections for Asia's future.

**Topic 6: Competing Visions of the Good Life.** Same as Core Texts and Ideas 303. Introduces the great rival conceptions of the moral basis and goals of political life as elaborated by revolutionary thinkers throughout the history of political philosophy, including Aristotle, Aquinas, Locke, late modern critics of the Enlightenment, and others. Only one of the following may be counted: Core Texts and Ideas 303, Government 314 (Topic 6), Western Civilization 303 (Topic: Competing Visions of the Good Life).

### **GOV 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Government.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Government. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **GOV 320K. American Constitutional Development I.**

Primarily for prelaw students and government majors. A survey of the origin and growth of the American constitutional system, with emphasis on the political and economic background. Three lecture hours a week

for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 320L. Arab-Israeli Politics.**

Same as Middle Eastern Studies 341 (Topic 5: Arab-Israeli Politics). In-depth study of domestic, regional, and international factors involved in politics in the Middle East, including simulation of diplomatic interaction in the Arab-Israeli conflict. Three lecture hours a week for one semester. Only one of the following may be counted: Government 320L, Middle Eastern Studies 322K (Topic 30: Arab-Israeli Politics), 323K (Topic 1: Arab-Israeli Politics), 341 (Topic 5). Prerequisite: Upper-division standing.

### **GOV 320N. American Constitutional Development II.**

Primarily for prelaw students and government majors. Government 320N and 357M (Topic: American Constitutional Development II) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 321. American State Politics.**

The states as subsystems of the American political system; state political cultures, social-economic environments, federalism, political participation, interest groups, parties, legislatures, executives, courts, and selected public policies. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 321M. Politics in Japan.**

Same as Asian Studies 321M. Survey of postwar Japanese politics; the occupation, governmental institutions, interest groups, protest movements, industrial policy, the government-business relationship, and political and economic reform. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 321M, 361 (Topic: Politics in Japan), Government 321M. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 322M. Politics in China.**

Same as Asian Studies 322M. Survey of twentieth-century China: historical trends; 1911 revolution; Warlord-Nationalist period; Communist revolution; post-1949 issues; new social and political institutions. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 322M, 361 (Topic: Politics in China), Government 322M. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 324J. Governments and Politics of Eastern Europe.**

Same as European Studies 348 (Topic 1: Governments and Politics of Eastern Europe) and Russian, East European, and Eurasian Studies 335 (Topic 2: Governments and Politics of Eastern Europe). Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 348 (Topic 1), 361 (Topic 14: Governments and Politics of Eastern Europe), Government 324J, Russian, East European, and Eurasian Studies 335 (Topic 2). Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 324L. Governments and Politics of Western Europe.**

Same as European Studies 350. Comparative study of peoples, institutions, parties, interest groups, and bureaucracy in the countries of Western Europe, concentrating on the major political systems of Britain, France, Germany, and Italy. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 350, 361 (Topic 14: Governments and Politics of Western

Europe), Government 324L. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 325. Political Parties.**

Character of the American party system, organization and leadership; pressure politics; the nominating process, campaigns, suffrage, elections, and the expression of public opinion. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 327L. Public Opinion and American Politics.**

The nature of and major influences on public attitudes, the measurement of public opinion, and the role of public opinion in government. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 328L. Introduction to Latin American Government and Politics.**

Same as Latin American Studies 337M (Topic 5: Introduction to Latin American Government and Politics). An introductory survey of Latin American political systems: governmental organization, political processes, and current problems. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Government.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Government. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **GOV 330K. The American President.**

Development of the power and influence of the president; nomination, election, and responsibility; case studies of presidential problems; comparison of president and other executives. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 331L. Law and Society.**

Designed primarily for prelaw students. The role of law in the context of major social issues; legal research and oral argument. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 335M. Topics in Political Thought.**

Intensive examination of selected issues in political thought. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

#### **Topic 3: Politics and Reality.**

**Topic 5: Religion in American Political Thought.** Same as Religious Studies 346 (Topic 2: Religion in American Political Thought).

**Topic 7: Feminist Theory.** Government 335M (Topic 7) and Women's and Gender Studies 322 (Topic 4: Feminist Theory) may not both be counted.

**Topic 8: Contemporary European Social Theory.** Same as Philosophy 365 (Topic 4: Contemporary European Social Theory) and Sociology 352M (Topic 7: Contemporary European Social Theory).

**Topic 9: Contemporary American Social Theory.** Same as Philosophy 365 (Topic 5: Contemporary American Social Theory) and Sociology 352M (Topic 8: Contemporary American Social Theory). Only one of the following may be counted: Government 335M (Topic: Social Theory), 335M (Topic 9), Philosophy 365 (Topic 5), Sociology 352M (Topic 8).

### **GOV 335N. Topics in American State Government and Politics.**

Analysis of varying topics in the study of American state government and politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

#### **Topic 1: American State Constitutions.**

#### **Topic 2: American State Legislatures.**

#### **Topic 3: Texas Political History.**

**Topic 4: Texas Political Parties and Elections.** An examination of the nature of Texas electoral politics.

**Topic 5: State Politics and Public Policy.** Survey of the revitalization of political institutions in the American states and the implications for the making of public policy.

**Topic 6: American State Politics.** Examination of the political power, policy responsibilities, and institutional capacities of state governments.

**Topic 7: Southern Political History.** Covers the colonial period to the present and includes topics such as progressive nationalism, defensive sectionalism, reconstruction, the civil rights movement, and partisan realignment. Government 335N (Topic 7) and 335N (Topic: Texas and the New Southern Politics) may not both be counted.

### **GOV 336M. Governments and Politics of Russia.**

Issues of nationalism and state-building facing Russia and its neighbors. Evaluation of the post-Soviet experience from the perspectives of both domestic and foreign policy. Three lecture hours a week for one semester. Government 336M and Russian, East European, and Eurasian Studies 335 (Topic 3: Governments and Politics of Russia) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 337M. Topics in Latin American Government and Politics.**

In-depth analysis of the governmental process in Latin American countries, and topical treatment of political and administrative patterns across the region. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

#### **Topic 2: Parties, Elections, and Democracy in Latin America.**

Same as Latin American Studies 337M (Topic 2: Parties, Elections, and Democracy in Latin America).

**Topic 3: Politics in South America.** Same as Latin American Studies 337M (Topic 3: Politics in South America).

**Topic 4: United States-Mexican Border Relations.** Same as Mexican American Studies 374 (Topic 14: United States-Mexican Border Relations) and Latin American Studies 337M (Topic 4: United States-Mexican Border Relations).

**Topic 5: Politics and Culture of Contemporary Mexico.** Same as Mexican American Studies 374 (Topic 28: Politics and Culture

of Contemporary Mexico), Latin American Studies 325 (Topic 3: Politics and Culture of Contemporary Mexico), and Sociology 338M. Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Additional prerequisite: Upper-division standing six semester hours of lower-division coursework in government.

#### **GOV 338L. East Asian International Relations.**

Same as Asian Studies 338L. Survey of Russian/Soviet, Japanese, Chinese, and American foreign policies of the twentieth century, emphasizing Pacific-region interests; historical policies; intermittent conflicts, such as China versus Japan, Korean War, Indochina Wars; China's emergence as a nuclear power. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 338L, 361 (Topic: East Asian International Relations), Government 338L. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

#### **GOV 339L. Research Methods in Government.**

An introduction to research design, data collection and analysis, and the use of the computer and related equipment. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 340M. Readings in Government.**

Individually guided and supervised readings and research in selected topics in government. Schedule and topic of study determined by student in consultation with instructor. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, and written consent of instructor and the undergraduate adviser.

#### **GOV 341M. Decision Theory.**

An introduction to the basic concepts and models using decision theory in political science, with particular emphasis on utility analysis, game theory, coalition formation, and voting behavior. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 342N. Public Choice.**

The political-economic models that have developed in this area of social science. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 344. American Foreign Relations.**

The aims, methods, and accomplishments of United States foreign policy since World War II, by geographic areas and by special problems. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 344L. Introduction to Comparative Politics.**

Introductory survey of basic concepts, perspectives, approaches, and trends in comparative politics, with emphasis on the formal-legal, group, class, elite, political culture, structural-functional, and systems approaches. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 347K. Governments and Politics of South Asia.**

Same as Asian Studies 347K. A survey of political developments, governmental organization, and economic and social problems in

South Asia. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 347L. Introduction to Political Theory.**

Study of political theory: what it is; its origins; tradition; political theory today. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 348. Government and the American Economy.**

Relationship of government to the economic system; past trends and present problems in government policy in the United States. Three lecture hours a week for one semester. Prerequisite: Economics 304L and six semester hours of lower-division coursework in government.

#### **GOV 350K. Statistical Analysis in Political Science.**

Elementary statistical techniques and their applications to problems in political science. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

#### **GOV 351C. The Classical Quest for Justice.**

Same as Core Texts and Ideas 320. Introduces students to classical political thought through a study of seminal works of antiquity, focusing on those of Plato and Aristotle. Three lecture hours a week for one semester. Only one of the following may be counted: Core Texts and Ideas 320, 335 (Topic: Classical Quest for Justice), Government 335M (Topic: Classical Quest for Justice), 351C, Western Civilization 320 (Topic: Classical Quest for Justice). Prerequisite: Completion of at least thirty semester hours of coursework.

#### **GOV 351D. The Theoretical Foundations of Modern Politics.**

Same as Core Texts and Ideas 321. Examines competing foundations of the ongoing development of political and social modernity. Examines a selection of major authors from Machiavelli to Nietzsche. Three lecture hours a week for one semester. Only one of the following may be counted: Core Texts and Ideas 321, 335 (Topic: The Theoretical Foundations of Modern Politics), Government 335M (Topic: The Theoretical Foundations of Modern Politics), 351D, Western Civilization 320 (Topic: The Theoretical Foundations of Modern Politics). Prerequisite: Completion of at least thirty semester hours of coursework.

#### **GOV 351E. Contemporary Political Theory.**

Introduces ongoing debates about identity, power, justice, rights, and democracy that are central to the theories of contemporary thinkers from Arendt to Habermas. Three lecture hours a week for one semester. Government 335M (Topic: Contemporary Political Theory) and 351E may not both be counted. Prerequisite: Completion of at least thirty semester hours of coursework.

#### **GOV 351G. Critics of Modern Liberalism.**

Same as Core Texts and Ideas 322. Selected critics of the philosophy of the Enlightenment from both the Left and the Right, and from the time of Rousseau to the present. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 322, Government 335M (Topic: Liberalism and its Critics), 351G. Prerequisite: Upper-division standing.

#### **GOV 351J. Might and Right among Nations.**

Same as Core Texts and Ideas 323. Major alternative approaches to the question of the moral character of international relations, as



elaborated by some of the greatest political thinkers. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 323, 335 (Topic: Might and Right among Nations), Government 335M (Topic: Might and Right among Nations), 351J, Western Civilization 320 (Topic: Might and Right among Nations). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **GOV 351L. Morality and Politics.**

Same as Core Texts and Ideas 325. Interdisciplinary readings from major works exploring issues of ethics and leadership. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 325, Government 335M (Topic: Morality and Politics), 351L. Prerequisite: Upper-division standing.

### **GOV 353D. Darwin and the Politics of Evolution.**

Same as Core Texts and Ideas 372. A careful reading of Darwin's influential *Origin of the Species by Means of Natural Selection*, together with an examination of the religious, political, and scientific controversies the book has inspired from its first publication to the present day. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Core Texts and Ideas 370 (Topic: The Politics of Evolution), 372, Government 335M (Topic: The Politics of Evolution), 353D. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **GOV 355M. Topics in Political Science.**

Emphasis on varying topics in government and politics of contemporary interest and concern. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

#### **Topic 1: Human Behavior as Rational Action.**

### **GOV 357L. Judicial Process and Behavior.**

Introduction to traditional and modern approaches to the study of the judicial process, with emphasis on the nature and origin of judicial decisions and the factors that affect judicial decision making. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 357M. Topics in Public Law.**

Intensive study of various aspects of law and the legal system. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 1: Gender-Based Discrimination.** Same as American Studies 370 (Topic 6: Gender-Based Discrimination) and Women's and Gender Studies 345 (Topic 8: Gender-Based Discrimination). Studies the substance of laws that relate to gender-based roles, and the participation of women in the legal process. Three lecture hours a week for one semester. Additional prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

**Topic 3: Supreme Court and Public Policy.** Two lecture hours and one discussion hour a week for one semester.

**Topic 4: Civil Liberties.** Three lecture hours a week for one semester.

**Topic 5: Constitutional Interpretation.** Three lecture hours a week for one semester.

#### **Topic 6: Constitutional Politics, Law, and Citizenship.**

Examination of the development of constitutional order and the debates over citizenship and civic membership. Three lecture hours a week for one semester. Asian American Studies 325 (Topic: Constitutional Politics, Law, and Citizenship) and Government 357M (Topic 6) may not both be counted.

**Topic 7: Constitutional Structure of Power.** Examination of the power of federal and state governments, the emergency power of the executive branch, and the authority of the Supreme Court. Three lecture hours a week for one semester.

**Topic 8: Structure of Individual Liberties.** Study of individual rights protected by the Constitution, with an emphasis on the United States Supreme Court. Three lecture hours a week for one semester.

**Topic 9: Asian American Jurisprudence.** Same as American Studies 321 (Topic 5: Asian American Jurisprudence) and Asian American Studies 325 (Topic 5: Asian American Jurisprudence). Introduction to the study of Asian Americans and the law. Examines the historical development of United States law and its relationship to Asian Americans, and of Asian American jurisprudence as an independent field of legal scholarship. Three lecture hours a week for one semester. Additional prerequisite: Upper-division standing.

### **GOV 358. Introduction to Public Policy.**

A survey of American public policy, with emphasis on modern problems and trends. Three lecture hours a week for one semester. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 360N, 460N. Topics in International Relations.**

Special studies stressing the theoretical aspects or the substantive policy problems of international politics. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

#### **Topic 1: America in Decline?.**

#### **Topic 2: Causes of War.**

**Topic 4: Understanding the Cold War.** Government 360N (Topic 4) is same as Russian, East European, and Eurasian Studies 335 (Topic 15: Understanding the Cold War).

#### **Topic 8: Democracy, War, and Peace.**

#### **Topic 9: Force and Politics.**

**Topic 10: Introduction to International Relations.** Asian Studies 361 (Topic: Introduction to International Relations Theory) and Government 360N (Topic 10) may not both be counted.

**Topic 11: International Political Economy.** Study of the changing relationship between political and economic power in international relations.

**Topic 12: International Security.** Comprehensive survey of conventional security issues, including causes of war, ethnic conflict, and terrorism.

### **GOV 362L, 662L. Government Research Internship.**

Fieldwork in research and analysis on governmental and political problems. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Only six semester hours of an internship course in government may be counted toward a major

in government. Prerequisite: Six semester hours of lower-division coursework in government and consent of instructor.

### **GOV 365L. Studies in Asian Politics.**

Special studies of political behavior and institutions, problems, or developments in individual countries or in the region. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 1: Politics of Economic Development in East Asia.** Same as Asian Studies 361 (Topic 12: Politics of Economic Development in East Asia).

**Topic 2: Japanese Foreign Policy.** Same as Asian Studies 361 (Topic 22: Japanese Foreign Policy). An introduction to the foreign and domestic determinants of Japanese foreign policy.

**Topic 3: International Relations of East and Southeast Asia.** Same as Asian Studies 361 (Topic 23: International Relations of East and Southeast Asia). An introduction to the international relations of East and Southeast Asia, with particular attention to postwar economic and security issues, the changing political landscape of the post-Cold War period, and the development and functions of regional institutions.

### **GOV 365N, 465N. Topics in Comparative Politics.**

Analysis of varying topics in the comparative study of political processes. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Politics in Contemporary Africa.** Government 365N (Topic 1) is same as African and African Diaspora Studies 365. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 2: Immigration and Comparative Politics.** Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 3: The Military in Politics.** Only one of the following may be counted: Government 365N (Topic 3); Latin American Studies 337M (Topic 9: The Military in Politics); Russian, East European, and Eurasian Studies 335 (Topic 10: The Military in Politics). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 4: Political Development in Eastern Europe and Latin America.** Government 365N (Topic 4) is same as Latin American Studies 337M (Topic 6: Political Development in Eastern Europe and Latin America). Only one of the following may be counted: Government 365N (Topic 4), Latin American Studies 337M (Topic 6), Russian, East European, and Eurasian Studies 335 (Topic 7: Political Development in Eastern Europe and Latin America). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 5: States and Peasants.** Government 365N (Topic 5) is same as African and African Diaspora Studies 372F (Topic 3: States and Peasants). African and African Diaspora Studies 374 (Topic 5: States and Peasants) and Government 365N (Topic 5) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 6: German Nationalisms.** Government 365N (Topic 6) is same as Germanic Civilization 360E (Topic 3: German Nationalisms). German national movements within their historical context, and the present-day implications of nationalism. Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

**Topic 8: Switzerland and Europe: Integration or Isolation.** Government 365N (Topic 8) is same as Germanic Civilization 360E (Topic 5: Switzerland and Europe: Integration or Isolation). Culture, society, history, economics, and politics in historical and contemporary Switzerland. Only one of the following may be counted: Germanic Civilization 360E (Topic: Switzerland: Seven Hundred Years), 360E (Topic 5), Government 365N (Topic: Switzerland: Seven Hundred Years), 365N (Topic 8). Prerequisite: For government majors, six semester hours of lower-division coursework in government; for others, upper-division standing.

**Topic 9: International Environmental Policy.** Government 365N (Topic 9) is same as Asian Studies 361 (Topic 20: International Environmental Policy). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 10: Australian Society and Politics.** Government 365N (Topic 10) is same as Sociology 352M (Topic 12: Australian Society and Politics). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 11: Political Transition in Europe and Latin America.** Government 365N (Topic 11) is same as Latin American Studies 337M (Topic 10: Political Transition in Europe and Latin America). Only one of the following may be counted: European Studies 361 (Topic 21: Political Transition in Europe and Latin America), Government 365N (Topic 11), Latin American Studies 337M (Topic 10). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 12: Globalization in the Middle East and North Africa.** A comparison of economic and political development strategies in the countries of the Middle East and North Africa. Government 365N (Topic 12), and Middle Eastern Studies 323K (Topic: Globalization in the Middle East and North Africa) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 13: Politics of New Democracies.** Examination of the process of democratization and factors related to its success. Government 365N (Topic 13) and Russian, East European, and Eurasian Studies 335 (Topic: Politics of New Democracies) may not both be counted.

**Topic 14: Politics of the Welfare State.** Introductory survey of trends in welfare state development in North America, Western Europe, and Australia.

### **GOV 365P. The Politics of Oil.**

The national and international political complexities of petroleum; relationship of trends in petroleum economics to international political alignments. Three lecture hours a week for one semester. Government 365P and Middle Eastern Studies 322K (Topic 7: The Politics of Oil) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

### **GOV 370K. Racial and Ethnic Politics.**

An examination of the role of racial and ethnic minorities in politics and of the impact of politics on these minorities. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 2: Latino Politics.** Same as Mexican American Studies 374 (Topic 15: Latino Politics) and Latin American Studies 337M (Topic 8: Latino Politics).

**Topic 3: African American Politics.** The evolution and role of African American politics within the American political system. African and African Diaspora Studies 374D (Topic: African American Politics) and Government 370K (Topic 3) may not both be counted.

**Topic 4: The Black Church in African American Politics.**

Examination of the political role of the black church and its leaders in the development of African American political behavior. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Black Church in African American Politics), 374D (Topic: Black Church in African American Politics), Government 370K (Topic 4), Religious Studies 346 (Topic: Black Church in African American Politics).

**Topic 5: Race and Democracy.** Examination of multicultural and multiracial influences on democratic societies. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Race and Democracy), 374D (Topic: Race and Democracy), Government 370K (Topic 5).

**GOV 370L. Topics in American Government and Politics.**

Analysis of varying topics in the study of American government and politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 1: Election Campaigns.**

**Topic 2: Leadership in America.** Same as American Studies 370 (Topic 10: Leadership in America) and Women's and Gender Studies 345 (Topic 34: Leadership in America). Introduction to the concepts of leadership and the application of those concepts in public and political leadership. Additional prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

**Topic 3: Bureaucracy in America.****Topic 5: Parties and Electoral Politics in the United States.****Topic 6: Politics of Hollywood.****Topic 7: The United States Congress.****Topic 8: Congress and the Executive Branch.****Topic 9: Social Movements: Theory and Practice.****Topic 10: Congress and the Presidency.**

**Topic 11: Urban Politics.** Same as Urban Studies 350 (Topic 1: Urban Politics).

**Topic 12: Congressional Elections.** Examination of congressional campaigns and election outcomes from both historical and contemporary perspectives.

**Topic 13: Leaders and Followers in American Politics.**

Examination of the relationship between elected officials and voters.

**Topic 14: The News Media as a Political Institution.** Analysis of the role of the news media in American politics and the operation of national government. Government 370L (Topic 14) and Urban Studies 350 (Topic: News Media as a Political Institution) may not both be counted.

**Topic 15: Political Communication.** Introduction to the impact of modern forms of communication on American governance.

**Topic 16: Political Psychology.** Study of the role of psychological theories in understanding politics and forming political views.

**Topic 17: Money in United States Politics.** Study of the nature and consequences of campaign finance on American politics. Government 370L (Topic 17) and 379S (Topic: Money in Politics--Honors) may not both be counted.

**Topic 18: Politics and the Economy.** Survey of the relationship between politics and market behavior in democracies.

**Topic 19: The United States as a Territorial Nation.** Examination of the history, public policy, law, and political philosophy behind United States territories and land acquisitions.

**GOV 370M. Research on the United States Congress.**

Independent research on lawmaking in the modern United States Congress. Individual instruction. Prerequisite: Six semester hours of lower-division coursework in government.

**GOV 371N, 671N. Administrative Internship.**

Students perform research and related activities in a national, state, or local administrative agency. Written reports required. The equivalent of three or six lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government and consent of instructor.

**GOV 372N, 672N. Campaigns and Elections Internship.**

Students perform research and related activities in political campaigns and polling. Written reports required. The equivalent of three or six lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government and consent of instructor.

**GOV 373N, 673N. Legislative Internship.**

Students perform research and related activities in a national, state, or local legislature. Written reports required. The equivalent of three or six lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government and consent of instructor.

**GOV 374N. Political Internship.**

Students perform research and related activities for an entity directly related to government and politics. Written reports required. The equivalent of three lecture hours a week for one semester. Only six semester hours of an internship course in government may be counted toward a major in government. Prerequisite: Twelve semester hours of coursework in government.

**GOV 679H. Honors Tutorial Course.**

Lectures and supervised individual research and the writing of a substantial paper on a special topic in the field of government. No grade is awarded until the student has completed the two-semester sequence. Three lecture hours a week for two semesters. Prerequisite: For 679HA, upper-division standing, admission to the Government Honors Program, and written consent of the Government Honors Program adviser; for 679HB, Government 679HA.

**GOV 379S. Honors Seminar.**

Substantive focus varies each semester. Topics include but are not limited to constitutional interpretation, political thought, the evolution of American politics, and comparative politics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Completion of thirty semester hours of coursework, including at least six hours of government.

## Department of History

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University



courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## History: HIS

### Lower-Division Courses

#### HIS 301F. The Premodern World.

Survey of world history from human origins to the sixteenth century. Three lecture hours or two lecture hours and one discussion hour a week for one semester. History 301F and 306N (Topic: Premodern World) may not both be counted.

#### HIS 302C. Introduction to China.

Same as Asian Studies 302C. Introduction to Chinese civilization, past and present, including religion, literature, arts, philosophy, and history. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 302C, History 302C, 306N (Topic: Introduction to China).

#### HIS 304K (TCCN: HIST 2313). English Civilization before 1603.

Survey of English civilization from Roman times to the death of Queen Elizabeth I. Three lecture hours a week for one semester.

#### HIS 304L (TCCN: HIST 2314). English Civilization since 1603.

Survey of English history from the seventeenth century to the present. Three lecture hours a week for one semester.

#### HIS 304R. Judaism, Christianity, and Islam: An Introduction.

Same as Islamic Studies 311 (Topic 2: Judaism, Christianity, and Islam: An Introduction), Jewish Studies 311 (Topic 2: Judaism, Christianity, and Islam: An Introduction), and Religious Studies 304. Examines the intertwined historical developments of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims. Three lecture hours a week for one semester.

#### HIS 305K. History of East Asia to 1800.

Same as Asian Studies 301M (Topic 3: History of East Asia to 1800). A survey of the traditional history and culture of China, Japan, Korea, and Vietnam. Three lecture hours a week for one semester.

#### HIS 305L. History of East Asia since 1800.

Same as Asian Studies 301M (Topic 4: History of East Asia since 1800). A survey of the modern history of China, Japan, Korea, and Vietnam. Three lecture hours a week for one semester.

#### HIS 306K. Introduction to the Middle East: Religious, Cultural, and Historical Foundations.

Same as Middle Eastern Studies 301K. A survey of the history and civilization of the Middle East from the sixth to the fourteenth century. Three lecture hours a week for one semester.

#### HIS 306N. Topics in History.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 3: Key Ideas and Issues in Latin America.** Same as Latin American Studies 301. Broad introductory course to acquaint students with the main areas of interest in Latin American studies.

**Topic 4: Introduction to Russian, East European, and Eurasian Studies: History.** History 306N (Topic 4) and Russian, East European, and Eurasian Studies 301 may not both be counted.

**Topic 5: Introduction to the Middle East: Adjustment and Change in Modern Times.** Same as Government 314 (Topic 3: Introduction to the Middle East: Adjustment and Change in Modern Times) and Middle Eastern Studies 301L. The responses of the societies of the Middle East and North Africa (Turkey, Iran, Afghanistan, Israel, and the Arab world) to Western cultural and political challenges, primarily since about 1800.

**Topic 7: Introduction to Islam.** Same as Islamic Studies 310 and Religious Studies 319. The beliefs, theology, history, and main social and legal institutions of Islam, including the concept of God and society, the role of women, and Islamic government and movements. Only one of the following may be counted: History 306N (Topic 7), Islamic Studies 310, Middle Eastern Studies 310 (Topic 1: Introduction to Islam), Religious Studies 319.

**Topic 8: Africa: A Visual Journey.** Same as African and African Diaspora Studies 317 (Topic 5: Africa: A Visual Journey). A broad introduction to key themes in African history and culture, from earliest times to the postindependence era. Designed around the video series *The Africans*.

**Topic 10: Jewish Civilization: Beginnings to 1492.** Same as Jewish Studies 304M and Religious Studies 313M. Introduction to the history, culture, and religion of the Jewish people from around 1000 BC to the end of the medieval period. Subjects may include ancient Israel, late Second Temple sectarianism, the rise of Christianity, rabbinic Judaism, medieval Jewish philosophy, Jewish mysticism, and Hebrew poetry. Only one of the following may be counted: History 306N (Topic: Jewish Civilization I), 306N (Topic 10), Jewish Studies 304M, 311 (Topic: Jewish Civilization I), Religious Studies 313 (Topic: Jewish Civilization I), 313M.

**Topic 11: Jewish Civilization: 1492 to the Present.** Same as Jewish Studies 304N and Religious Studies 313N. Subjects may include trends toward secularization, the emancipation of European Jewry, the emergence of American Jewry, the Holocaust, the establishment of the State of Israel, and the Arab-Israeli conflict. Only one of the following may be counted: History 306N (Topic 11), Jewish Studies 304N, 311 (Topic: Jewish Civilization: 1492 to the Present), Religious Studies 313 (Topic: Jewish Civilization: 1492 to the Present), 313N.

#### HIS 307C. Introduction to the History of India.

Same as Asian Studies 307C. Survey of the history of the Indian subcontinent from prehistoric times to the present. Three lecture hours a week for one semester.

#### HIS 309K (TCCN: HIST 2311). Western Civilization in Medieval Times.

Survey of medieval Europe from late antiquity to the fifteenth century. Three lecture hours a week for one semester.

#### HIS 309L (TCCN: HIST 2312). Western Civilization in Modern Times.

Survey of European civilization since the fifteenth century. Three lecture hours a week for one semester.

#### HIS 310. Introduction to Modern Africa.

Same as African and African Diaspora Studies 310K. Introduction to modern Africa, with focus on colonial and postcolonial development in political organization, economics, sociolinguistics, and literature. Three lecture hours a week for one semester.



### **HIS 310K. Latin American Civilization: The Colonial Experience.**

Same as Latin American Studies 310 (Topic 1: Latin American Civilization: The Colonial Experience). A broad survey of the political, economic, social, and cultural aspects of the Latin American past, stressing both that area's achievements and its enduring problems. Three lecture hours a week for one semester. Only one of the following may be counted: History 310K, 346K, Latin American Studies 310 (Topic 1), 366 (Topic 2: Latin America before 1810).

### **HIS 310L. Latin American Civilization: The National Experience.**

Same as Latin American Studies 310 (Topic 2: Latin American Civilization: The National Experience). A broad survey of the political, social, and cultural aspects of the Latin American past. Three lecture hours a week for one semester. Only one of the following may be counted: History 310L, 346L, Latin American Studies 310 (Topic 2), 366 (Topic 3: Latin America since 1810).

### **HIS 311K. Introduction to Traditional Africa.**

Same as African and African Diaspora Studies 310L. Introductory, interdisciplinary course on the peoples and cultures of Africa. Three lecture hours a week for one semester.

### **HIS 314K (TCCN: HIST 2328). History of Mexican Americans in the United States.**

Same as Mexican American Studies 316. Examines the origin and growth of the Mexican American community in the United States. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history.

### **HIS 315G. Introduction to American Studies.**

Same as American Studies 310. An interdisciplinary introduction to the historical exploration of American culture. Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 310, History 306N (Topic 2: Introduction to American Studies), 315G. Partially fulfills legislative requirement for American history.

### **HIS 315K (TCCN: HIST 1301). The United States, 1492-1865.**

Survey of United States history from the colonial period through the Civil War. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Partially fulfills legislative requirement for American history.

### **HIS 315L (TCCN: HIST 1302). The United States since 1865.**

Survey of United States history since the Civil War. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Partially fulfills legislative requirement for American history.

### **HIS 317L (TCCN: HIST 2381). Topics in United States History.**

Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. May be repeated for credit when the topics vary.

**Topic 1: Colonial America.**

**Topic 2: The Era of the American Revolution.**

**Topic 3: Introduction to African American History.** Same as African and African Diaspora Studies 317D (Topic 1: Introduction to African American History). Only one of the following may be counted: African and African Diaspora Studies 317 (Topic:

Introduction to African American History) and 317D (Topic 1), History 317L (Topic 3). Partially fulfills legislative requirement for American history.

**Topic 4: Introduction to Asian American History.** Same as Asian American Studies 312. Introduces students to the national and transnational histories of Asian Americans in the United States. Explores a wide range of themes related to the Asian American experience. Partially fulfills legislative requirement for American history.

**Topic 5: United States Women, Sexuality, and Gender to 1865.** Same as Women's and Gender Studies 301 (Topic 11: United States Women, Sexuality, and Gender to 1865). Partially fulfills legislative requirement for American history.

**Topic 6: The United States in the 17th-Century Atlantic World.** The United States during a period marked by the spread of knowledge and experience of the world through conflict, economic exchange, cultural creativity, exploration, New World colonization, technological innovation, and religious reformation and counter-reformation.

**Topic 7: The United States and Africa.** Same as African and African Diaspora Studies 317C (Topic 1: The United States and Africa). History of political, economic, and cultural relations between the United States and Africa from the early origins of the slave trade to the present. Only one of the following may be counted: African and African Diaspora Studies 317 (Topic: United States and Africa) and 317C (Topic 1), History 317L (Topic 7). Partially fulfills legislative requirement for American history.

**Topic 8: Introduction to American Indian History.**

**Topic 9: The Black Power Movement.** Same as African and African Diaspora Studies 317D (Topic 3: The Black Power Movement). Examines the major organizations, key figures, and ideologies of the Black Power movement from the late 1960s and early 1970s. Partially fulfills legislative requirement for American history.

### **HIS 317N. Topics in History.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework.

### **HIS 318Q. Supervised Research.**

Individual instruction.

### **HIS 319D. The Ancient Mediterranean World.**

Same as Ancient History and Classical Civilization 319 (Topic 1: The Ancient Mediterranean World) and Classical Civilization 319D. Survey of the ancient Mediterranean from ca. 3000 BC to AD 476. Focus on the development of ideas and institutions in the Greek and Roman worlds and on the active cultural exchange among the diverse civilizations of the broader region that shaped Greek and Roman history and cultural identity. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

### **HIS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in History.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### HIS 320L. Texas until 1845.

Same as Mexican American Studies 320L. A study of Texas from before the European discovery through the exploration and mission periods to status as a Mexican colony and an independent republic. Three lecture hours a week for one semester. Only one of the following may be counted: History 320L, Mexican American Studies 320L, 374 (Topic: Texas until 1845). Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

### HIS 320P. Texas, 1845-1914.

A study of Texas through early statehood, the Civil War and Reconstruction, and its expansion from a dependent state to a beginning industrial entity. Three lecture hours a week for one semester. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

### HIS 320R. Texas, 1914 to the Present.

Same as Mexican American Studies 374 (Topic 16: Texas, 1914 to the Present) and Urban Studies 353 (Topic 2: Texas, 1914 to the Present). The steady dissociation of Texas from its Old South status to a transitional state and a power in national politics. Three lecture hours a week for one semester. Three semester hours of Texas history may be substituted for half of the legislative requirement for American history. Prerequisite: Upper-division standing.

### HIS 321. The History of Rome: The Empire.

Same as Ancient History and Classical Civilization 325 (Topic 2: The History of Rome: The Empire). A survey of the Roman world from Augustus to Constantine the Great. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 321G. Rome and Jerusalem.

Same as Ancient History and Classical Civilization 325 (Topic 3: Rome and Jerusalem), Jewish Studies 365 (Topic 7: Rome and Jerusalem), Middle Eastern Studies 342 (Topic 21: Rome and Jerusalem), and Religious Studies 365 (Topic 1: Rome and Jerusalem). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Three lecture hours a week for one semester. Only one of the following may be counted: Ancient History and Classical Civilization 325 (Topic 3), Classical Civilization 348 (Topic: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7), Middle Eastern Studies 320 (Topic 2: Rome and Jerusalem), 342 (Topic 21), Religious Studies 365 (Topic 1), Urban Studies 353 (Topic: Rome and Jerusalem). Prerequisite: Upper-division standing.

### HIS 321M. The History of Rome: The Republic.

Same as Ancient History and Classical Civilization 325 (Topic 1: The History of Rome: The Republic). A survey of Roman history from the founding of Rome to the death of Julius Caesar. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 322C. Cultural History of World Science to 1650.

Cultural history of science from ancient times to the seventeenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 322D. The Scientific Revolution of the Seventeenth Century.

The history of science and its place in society from the mid-sixteenth century to the time of Isaac Newton. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 322G. History of the Modern Life Sciences.

History of the life sciences from the eighteenth century to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 322M. History of Modern Science.

The history of science and its place in society from the time of Newton to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 323L. Europe since 1919.

Survey course emphasizing the impact of the two world wars on European social, political, and cultural life in the twentieth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 328M. Modern Brazil.

Same as Latin American Studies 366 (Topic 12: Modern Brazil). The social, economic, political, and cultural forces that have shaped modern Brazil. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 329P. History of the Atomic Bomb.

The development, use, and influence of nuclear weapons from the 1930s to 1954. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### HIS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in History.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of History. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### HIS 329U. Perspectives on Science and Mathematics.

An examination of five notable episodes in the history of science: Galileo's conflict with the Catholic Church, Isaac Newton's formulation of the laws of motion, Charles Darwin's proposal of the theory of evolution by natural selection, the development of the atomic bomb, and the discovery of the double helix structure of DNA. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: History 329U, 366N (Topic: Perspectives on Science and Mathematics), Philosophy 329U. Prerequisite: Upper-division standing and consent of instructor.

### HIS 331C. History of the Ottoman Empire.

Same as Middle Eastern Studies 331C. A survey of Ottoman society and culture and of the empire's place on the world scene. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 331G. History of Iran to 1800.**

Same as Middle Eastern Studies 343 (Topic 3: History of Iran to 1800). A survey of the social, economic, and religious components unique to Iran from the pre-Islamic empire of the Achaemenids through the development of Iran as a medieval and premodern Islamic state. Three lecture hours a week for one semester. Only one of the following may be counted: History 331G, Middle Eastern Studies 321K (Topic 3 History of Iran to 1800), 343 (Topic 3). Prerequisite: Upper-division standing.

### **HIS 331J. History of the Arab World.**

A general survey of the origins and development of Arabic civilization. Three lecture hours a week for one semester. History 331J and Middle Eastern Studies 321K (Topic 2: History of the Arab World) may not both be counted. Prerequisite: Upper-division standing.

### **HIS 331L. Modern Iran.**

Same as Middle Eastern Studies 343 (Topic 6: Modern Iran). The development of modern Iran; special attention is given to the impact of the West, the constitutional movement, nationalism, the oil crisis, and the Islamic Revolution of 1979. Three lecture hours a week for one semester. Only one of the following may be counted: History 331L, Middle Eastern Studies 323L, 324K (Topic 5: Modern Iran), 343 (Topic 6). Prerequisite: Upper-division standing.

### **HIS 331R. Re-forming the Arab East, 1914-Present.**

Same as Middle Eastern Studies 343 (Topic 2: Re-forming the Arab East, 1914-Present). Introduction to the history of the Middle East in the twentieth century. Examines forces that transformed the area from a relatively peaceful region to a radicalized environment. Explores colonialism, nationalism, secular modernism, impact of Zionism, rise of political Islam, status of women, and the oil revolution. Three lecture hours a week for one semester. Only one of the following may be counted: History 331R, History 364G (Topic: Re-forming the Arab East), Middle Eastern Studies 322K (Topic: Re-forming the Arab East), 343 (Topic 2). Prerequisite: Upper-division standing.

### **HIS 332G. European Intellectual History from the Enlightenment to Nietzsche.**

Explores significant intellectual developments in Europe throughout the nineteenth century. Themes include romanticism, positivism, socialism, and nihilism. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 332J. Twentieth-Century European Intellectual History.**

Explores significant intellectual developments in Europe in the twentieth century. Topics include psychoanalysis, sociology, existentialism, and poststructuralism. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 333L. United States Foreign Relations, 1776-1914.**

The history of United States foreign policy and diplomacy from the founding of the United States to the outbreak of the First World War. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 333M. United States Foreign Relations, 1914 to the Present.**

The history of United States foreign policy and diplomacy from the First World War to the present. Three lecture hours a week for one

semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 334C. Music Cultures of the Middle East, Past and Present.**

Same as Middle Eastern Studies 334C. A historical and ethnomusicological survey of the Arab, Turkish, and Persian music cultures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 334E. Modern Egypt: A History.**

Same as Islamic Studies 373 (Topic 5: Modern Egypt: A History) and Middle Eastern Studies 343 (Topic 1: Modern Egypt: A History). Critically examines the social, political, and intellectual dynamics that shaped the different forms of political community, economic organization, and public culture over the past century. Covers colonialism, liberalism, Arab socialism, authoritarian capitalism, and Islamic republicanism. Three lecture hours a week for one semester. Only one of the following may be counted: Arabic 372 (Topic: Modern Egypt: A History), History 334E, History 364G (Topic: Modern Egypt: A History), Islamic Studies 372 (Topic: Modern Egypt: A History), 373 (Topic 5), Middle Eastern Studies 322K (Topic: Modern Egypt: A History), 343 (Topic 1). Prerequisite: Upper-division standing.

### **HIS 334J. History of Britain from the Restoration to 1783.**

Surveys the political, social, economic, and intellectual history of England and Great Britain from the restoration of the Stuart monarchy in 1660 to the conclusion of the War for American Independence in 1783. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 334L. The American Revolution and the Founding of the United States, 1763-1800.**

The Revolutionary transformation of America between 1763 and 1800. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 336L. The Old South.**

Southern institutions and the role of the South in American history. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 337N. Germany in the Twentieth Century.**

Same as Russian, East European, and Eurasian Studies 335 (Topic 11: Germany in the Twentieth Century). Survey of German political and military institutions, economic development, culture, and society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 340K. Traditional China.**

Same as Asian Studies 340K. History of China from its beginnings to 1800. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 340K, 361 (Topic: Traditional China), History 340K. Prerequisite: Upper-division standing.

### **HIS 340L. Post-Mao China: Change and Transformation.**

Same as Asian Studies 340L. Examines in a historical context the Chinese economy, society, politics, and culture during the reform era that began in the late 1970s. Explores the transformation of rural and urban economies and related social consequences; government systems, political ideologies, and popular values; and China's

integration into the global system and its impact on China's role in world politics. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 340L, 361 (Topic: Post-Mao China: Change and Transformation), History 340L, 364G (Topic: Post-Mao China: Change and Transformation). Prerequisite: Upper-division standing.

#### **HIS 340M. Modern China.**

Same as Asian Studies 340M. History of China from the intrusion of the West circa 1500 to the Communist revolution. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 340N. Communist China.**

Same as Asian Studies 340N. The history of China from the Communist takeover in 1949 to the present. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 340P. European Expansion in Asia.**

Same as Asian Studies 340P. European exploration, the commerce of the East India Companies, and the beginnings of empire in South and Southeast Asia from the fifteenth to the early nineteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 340R. European Empires in Asia.**

Same as Asian Studies 340R. The British in India and Malaya, the Dutch in Indonesia, and the French in Indochina since 1800. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 340S. The Chinese in the United States.**

Same as Asian American Studies 325 (Topic 3: The Chinese in the United States) and Asian Studies 340S. A lecture and discussion course on the history of the Chinese in the United States from their first arrival in significant numbers during the California Gold Rush of the mid-nineteenth century to the present. Three lecture hours a week for one semester. Only one of the following may be counted: Asian American Studies 325 (Topic: Chinese in the United States), 325 (Topic 3), Asian Studies 340S, History 340S. Partially fulfills the legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 340T. Taiwan: Colonization, Migration, and Identity.**

Same as Asian American Studies 325 (Topic 4: Taiwan: Colonization, Migration, and Identity) and Asian Studies 340T. Explores issues of ethnicity, empire, and modernization in East Asia from the sixteenth century to the present, as seen through encounters between Taiwan and aborigines, Han Chinese, Dutch, Portuguese, the imperial Qing, Japanese, mainland Chinese Nationalist Party (KMT), and the United States. Three lecture hours a week for one semester. Only one of the following may be counted: Asian American Studies 325 (Topic 4), Asian Studies 340T, 361 (Topic: Taiwan: Colonization, Migration, and Identity), History 340T, 364G (Topic: Taiwan: Colonization, Migration, and Identity). Prerequisite: Upper-division standing.

#### **HIS 341K. Origins of Modern Japan.**

Same as Asian Studies 341K. Japan to the beginnings of the Industrial Revolution, with a focus on the culminating age of samurai rule, the Tokugawa period (1600-1867). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 341M. Imperial Japan.**

Same as Asian Studies 341M. Japan from the Meiji transformation through war, defeat, and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 342C. Postwar Japan.**

Same as Asian Studies 341N. Japan since the war and occupation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 342D. Political Economy of Japan.**

Same as Asian Studies 342D. Historical development of the Japanese economy since early modern times. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 343. The Age of Reformation.**

Same as Religious Studies 344. Examines late medieval religion, the rise of Protestant movements, and the Catholic response in their cultural, political, and social contexts. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 343G. Italian Renaissance, 1350-1550.**

Survey of political, socioeconomic, religious, and intellectual trends during the Italian Renaissance. Three lecture hours a week for one semester. History 343G and 362K (Topic: Italian Renaissance, 1350-1550) may not both be counted. Prerequisite: Upper-division standing.

#### **HIS 343L. History of Russia to 1917.**

Same as Russian, East European, and Eurasian Studies 335 (Topic 5: History of Russia to 1917). Survey of Russian history from seventeenth-century Muscovy to the fall of the Romanovs in 1917. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 343M. History of Russia since 1917.**

Same as Russian, East European, and Eurasian Studies 335 (Topic 6: History of Russia since 1917). A survey of Russian history from the revolution of 1917 to the collapse of the Soviet Union. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 343P. History of Witchcraft.**

A study of witch beliefs and witchcraft prosecutions in western Europe and colonial America, mainly between 1100 and 1700. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 343W. Witches, Workers, and Wives.**

Same as European Studies 346 (Topic 3: Witches, Workers, and Wives) and Women's and Gender Studies 345 (Topic 29: Witches, Workers, and Wives). Explores the role of families and concepts of gender as expressed in key economic, social, political, and cultural patterns in early modern Europe. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 344E. France in the Middle Ages.**

Social, cultural, political, and economic history of France from the fall of the Roman Empire to the fifteenth century; emphasis on the development of feudalism and nationalism. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.



**HIS 344F. Anglo-Saxon England.**

The political, social, cultural, and legal history of England from about 410 to 1154. Lectures and discussion of primary sources. Three lecture hours a week for one semester. History 344F and 362K (Topic: Anglo-Saxon England) may not both be counted. Prerequisite: Upper-division standing.

**HIS 344G. Twelfth-Century Renaissance: 1050-1200.**

An examination of social, cultural, and intellectual developments in eleventh- and twelfth-century Europe. Three lecture hours a week for one semester. History 344G and 362K (Topic: Twelfth-Century Renaissance: 1050-1200) may not both be counted. Prerequisite: Upper-division standing.

**HIS 344J. Norman and Angevin England.**

Political, social, and legal history of England from the Norman conquest in 1066 to the end of the reign of Richard III in 1485. Three lecture hours a week for one semester. History 344J and 362K (Topic: Norman and Angevin England) may not both be counted.

**HIS 344M. Everyday Life in Early Modern Europe.**

Social history of early modern Europe (1400-1700), with emphasis on material conditions of social existence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**HIS 345J. The Coming of the Civil War, 1829-1861.**

Lecture and discussion course dealing with the historical conditions that led to the American Civil War. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**HIS 345L. The American Civil War and Reconstruction, 1861-1877.**

Lecture and discussion course on the Civil War and Reconstruction period. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**HIS 345M. The South since 1865.**

The history of the South after the Civil War through the civil rights movement. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**HIS 346C. Ancient India.**

Same as Asian Studies 346C. History and culture of South Asia from its protohistoric beginnings in the Indus Valley through the period of the early empires of the Mauryas and Guptas. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**HIS 346D. Medieval India.**

Same as Asian Studies 346D. History and culture of South Asia from approximately 500 to 1500, with emphasis on religious and political institutions and the emergence of regional cultures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**HIS 346J. Colonial Latin America through Objects.**

Same as Latin American Studies 366 (Topic 20). Examines objects, such as paintings, reliquaries, monstrosities, and churches from colonial Latin America in order to understand colonial culture. Includes critical reading of original texts. Three lecture hours a week for one semester. Only one of the following may be counted: History 346J,

363K (Topic: Colonial Latin America through Objects), Latin American Studies 366 (Topic 20). Prerequisite: Upper-division standing.

**HIS 346K. Colonial Latin America.**

Same as Latin American Studies 366 (Topic 2: Colonial Latin America). Basic survey course, designed as an introduction to Latin American history in the colonial period. Three lecture hours a week for one semester. Only one of the following may be counted: History 310K, 346K, Latin American Studies 310 (Topic 1: Latin American Civilization: The Colonial Experience), 366 (Topic 2). Prerequisite: Upper-division standing.

**HIS 346L. Modern Latin America.**

Same as Latin American Studies 366 (Topic 3: Modern Latin America). Continuation of History 346K and Latin American Studies 366 (Topic 2). Three lecture hours a week for one semester. Only one of the following may be counted: History 310L, 346L, Latin American Studies 310 (Topic 2: Latin American Civilization: The National Experience), 366 (Topic 3). Prerequisite: Upper-division standing.

**HIS 346M. Muslim India before 1750.**

Same as Asian Studies 346M and Religious Studies 341 (Topic 6: Muslim India before 1750). The history, art and architecture, and religions of India during the period of Muslim rule from the tenth to the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**HIS 346N. History and Culture of India since 1750.**

Same as Asian Studies 346N. The period of British rule, the nationalist movement, and independence, with emphasis on the impact of the West on Indian society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**HIS 346R. Revolution in Modern Latin America.**

Same as Latin American Studies 366 (Topic 13: Revolution in Modern Latin America). Comparison of the Mexican and Cuban revolutions and of their challenges to inter-American relations. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**HIS 346S. Revolution in Twentieth-Century Latin America.**

Same as Latin American Studies 366 (Topic 9: Revolution in Twentieth-Century Latin America). An introduction to recent Latin American history, with emphasis on phenomena that explain the apparent social unrest and political instability of the region. Three lecture hours a week for one semester. Only one of the following may be counted: History 346L, 366N (Topic: Revolution in Twentieth-Century Latin America), Latin American Studies 366 (Topic 9). Prerequisite: Upper-division standing.

**HIS 346T. The Cuban Revolution and the United States.**

Same as Latin American Studies 366 (Topic 17: The Cuban Revolution and the United States). The special economic and political relationship between the United States and Cuba from 1898 to 1967; and how the 1959 revolution affected the Cold War relationships between East and West, North and South. Three lecture hours a week for one semester. Only one of the following may be counted: History 346T, 366N (Topic: The Cuban Revolution and the US), Latin American Studies 366 (Topic: The Cuban Revolution and the US), 366 (Topic 17). Prerequisite: Upper-division standing.

**HIS 346V. Twentieth-Century Rural Latin America.**

Same as Latin American Studies 366 (Topic 19: Twentieth-Century Rural Latin America). Examines causes of some of the unresolved

conflicts affecting Latin America today, including the social-agrarian relationships linking landlords and campesinos; the role of the state and the impact of official ideologies involving indigenous people; religion and the Catholic Church; the history of rural institutions; and the success or failure of land reforms. Three lecture hours a week for one semester. Only one of the following may be counted: History 346V, 363K (Topic: Twentieth-Century Rural Latin America), Latin American Studies 366 (Topic 19). Prerequisite: Upper-division standing.

### **HIS 346W. Church and State in Latin America.**

Same as Latin American Studies 366 (Topic 21: Church and State in Latin America) and Religious Studies 368 (Topic 1: Church and State in Latin America). History of Church-state relations and religious politics in modern Latin America, with emphasis on the nineteenth to early twentieth-century periods. Three lecture hours a week for one semester. Only one of the following may be counted: History 346W, 363K (Topic: Church and State in Latin America), Latin American Studies 366 (Topic 21), Religious Studies 368 (Topic 1). Prerequisite: Upper-division standing.

### **HIS 347C. Reimagining Cuba, 1868-Present.**

Same as Latin American Studies 366 (Topic 22: Reimagining Cuba, 1868-Present). Explores Cuban-United States relations from the nineteenth century to the present, including issues of empire and transnationalism, and social change engagements between Cuba and the United States before and after the Cuban Revolution. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Reimagining Cuba, 1868-Present), 374E (Topic: Reimagining Cuba, 1868-Present), History 347C, 363K (Topic: Reimagining Cuba, 1868-Present), Latin American Studies 366 (Topic 22). Prerequisite: Upper-division standing.

### **HIS 347L. Seminar in Historiography.**

Restricted to students in the History Honors Program. Designed to familiarize students in the honors program with general problems of historiography, historical interpretation, and the philosophy of history. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.

### **HIS 349R. Military History to 1640.**

A broad survey of world military systems from ancient times to about 1640. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 349S. Survey of Military History, 1640 to 1900.**

An investigation of world military systems and of the evolution of military technology from about the time of the Thirty Years' War to the end of the nineteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 350L. Undergraduate Seminar in History.**

Lectures, discussion, reading, and research on selected topics in the field of history. Three lecture hours a week for one semester. History 350L and 350R may not both be counted unless the topics vary. Some sections are offered on the letter-grade basis only. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 5: Gandhi and Gandhism.** Same as Asian Studies 361 (Topic 6: Gandhi and Gandhism) and Religious Studies 341 (Topic 5: Gandhi and Gandhism).

**Topic 19: Resistance, Rebellion, and Revolution in Colonial Spanish America.** Same as Latin American Studies 366 (Topic 7: Resistance, Rebellion, and Revolution in Colonial Spanish America). Only one of the following may be counted: History 350L (Topic 19), Latin American Studies 366 (Topic: Resistance, Rebellion, and Revolution in Colonial Spanish America), 366 (Topic 7).

**Topic 25: Women in Asian Societies.** Same as Asian Studies 361 (Topic 14: Women in Asian Societies) and Women's and Gender Studies 340 (Topic 8: Women in Asian Societies).

**Topic 32: The Galileo Affair.**

**Topic 33: Heresy and the Inquisition.** Same as Religious Studies 357 (Topic 1: Heresy and the Inquisition).

**Topic 34: Medieval Islam: Faith and History.** Same as Middle Eastern Studies 343 (Topic 5: Medieval Islam: Faith and History) and Religious Studies 358 (Topic 2: Medieval Islam: Faith and History). Only one of the following may be counted: History 350L (Topic 34), Middle Eastern Studies 321K (Topic 7: Medieval Islam: faith and History), 343 (Topic 5), Religious Studies 358 (Topic 2).

**Topic 35: Nigeria: A History of Nation-Building.** Same as African and African Diaspora Studies 372G (Topic 2: Nigeria: A History of Nation-Building). Only one of the following may be counted: African and African Diaspora Studies 372G (Topic 2), 374 (Topic 18: Nigeria: A History of Nation-Building), 374C (Topic 1: Nigeria: A History of Nation-Building), History 350L (Topic 35).

**Topic 41: Stalinist Russia.** Same as Russian, East European, and Eurasian Studies 335 (Topic 12: Stalinist Russia).

**Topic 42: History of Modern Central America.** Same as Latin American Studies 366 (Topic 15: History of Modern Central America). Only one of the following may be counted: History 350L (Topic 42), 363K (Topic: History of Modern Central America), Latin American Studies 366 (Topic 15).

**Topic 44: Culture and Identity in Colonial Mexico.** Same as Latin American Studies 366 (Topic 16: Culture and Identity in Colonial Mexico).

**Topic 46: Women and Gender in China.** Same as Asian Studies 372 (Topic 21: Women and Gender in China) and Women's and Gender Studies 340 (Topic 18: Women and Gender in China).

**Topic 49: History of Imperialism.**

**Topic 50: Imperialism: Empire to Globalization.**

**Topic 54: Epics and Heroes of India.**

**Topic 56: Germany since Hitler.**

**Topic 57: Law and Society in Early Modern Europe.** Same as European Studies 346 (Topic 4: Law and Society in Early Modern Europe) and Women's and Gender Studies 340 (Topic 13: Law and Society in Early Modern Europe). Research seminar on how historians have explored the significance of law, criminal and civil, in the lives of early modern Europeans. Topics include infanticide, fornication, drunkenness, theft, debt, slander, and family disputes. Only one of the following may be counted: European Studies 346 (Topic 4), 361 (Topic: Law and Society in Early Modern Europe), History 350L (Topic 57), Women's and Gender Studies 340 (Topic 13).

**Topic 59: Stalin's Russia at War.** Only one of the following may be counted: History 350L (Topic 59), 362G (Topic: Stalin's Russia at War), 366N (Topic: Stalin's Russia at War).

**Topic 62: History of the Caribbean.** Same as Latin American Studies 366 (Topic 18: History of the Caribbean). Overview of Caribbean history from 1492 to the present. Topics include contact between European and native cultures, piracy, slavery, colonialism and decolonization, and revolutions.

**Topic 64: Einstein in the Age of Conflict.** Same as Core Texts and Ideas 371. Following the life and work of Albert Einstein, course examines the rise of the theories of relativity and quantum

mechanics upon the stage of international political upheaval. Only one of the following may be counted: Core Texts and Ideas 370 (Topic: Einstein in the Age of Conflicts), History 350L (Topic: Einstein in the Age of Conflicts), 350L (Topic: 64).

**Topic 65: The Chinese in Diaspora.** Same as Asian American Studies 325 (Topic 2: The Chinese in Diaspora). Explores narratives of migration, race, ethnicity, and a wide range of experiences of acculturation and assimilation from the perspective of a sending society--China--which has one of the longest and most diverse histories of sending people overseas. Over the last millennia, Chinese have migrated around the world and made homes under a great range of adversity and opportunity, producing many stories of human differences and commonalities. Only one of the following may be counted: Asian American Studies 325 (Topic: Chinese in Diaspora), 325 (Topic 2: The Chinese in Diaspora), Asian Studies 361 (Topic: Chinese in Diaspora), 361, 461 (Topic 28), History 350L (Topic: The Chinese in Diaspora), 350L (Topic 65: The Chinese Diaspora).

### **HIS 350R. Undergraduate Seminar in United States History.**

Lectures, discussion, reading, and research on selected topics in the field of United States history. Three lecture hours a week for one semester. History 350L and 350R may not both be counted unless the topics vary. Partially fulfills legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 1: Coastal Communities in Early America.**

**Topic 2: Lyndon Johnson and His Times.**

**Topic 3: Myth and Construction of American Identity.**

**Topic 4: Constitutional Issues in the Twentieth-Century United States.**

**Topic 5: American Cultural History of Alcohol and Drugs.** Same as American Studies 370 (Topic 1: American Cultural History of Alcohol and Drugs). Study of the American use and perception of drugs, including alcohol, and how they have changed over time. Examines significant shifts in American attitudes toward individualism and social control. Only one of the following may be counted: American Studies 370 (Topic 1), History 350L (Topic 2: American Cultural History of Alcohol and Drugs), 350R (Topic 5). Partially fulfills legislative requirement for American history.

**Topic 6: Deviance in America: An Alternative History.** Same as American Studies 370 (Topic 22: Deviance in America: An Alternative History). Examines movements and individuals outside the conventional mainstream and how they reflect American ideals and dilemmas. Only one of the following may be counted: American Studies 370 (Topic 22), History 350L (Topic 61: Deviance in America: An Alternative History), 350R (Topic 6). Partially fulfills legislative requirement for American history.

**Topic 7: Environmental History of North America.** Same as American Studies 329 and Urban Studies 353 (Topic 5: Environmental History of North America). The history of humanity's influence on the plants, animals, microlife, soils, water, and air of North America, and vice versa, from the arrival of the proto-Indians to the contemporary environmental crisis. Only one of the following may be counted: American Studies 329, History 350L (Topic 4: Environmental History of North America), 350R (Topic 7), Urban Studies 353 (Topic 5). Partially fulfills legislative requirement for American history.

**Topic 8: Women in Postwar America.** Same as American Studies 370 (Topic 30: Women in Postwar America) and Women's and Gender Studies 345 (Topic 37: Women in Postwar America). Only one of the following may be counted: American Studies 370 (Topic

30), History 350L (Topic 58: Women in Postwar America), 350R (Topic 8), Women's and Gender Studies 345 (Topic 37). Partially fulfills legislative requirement for American history.

**Topic 9: Animals and American Culture.** Same as American Studies 370 (Topic 28: Animals and American Culture) and Women's and Gender Studies 345 (Topic 43: Animals and American Culture). Explores the role of animals in American history, culture, and society. Only one of the following may be counted: American Studies 370 (Topic 28), History 350L (Topic 60: Animals and American Culture), 350R (Topic 9), Women's and Gender Studies 345 (Topic 43). Partially fulfills legislative requirement for American history.

**Topic 10: Slavery in the United States.** Same as African and African Diaspora Studies 374D (Topic 3: Slavery in the United States). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 21: Slavery in the United States), 374D (Topic 3), History 350L (Topic 39: Slavery in the United States), 350R (Topic 10). Partially fulfills legislative requirement for American history.

**Topic 11: Race and Beauty in American Culture.** Same as African and African Diaspora Studies 372C (Topic 2: Race and Beauty in American Culture). Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 2), 374D (Topic 1: Race and Beauty in American Culture), History 350L (Topic 52: Race and Beauty in American Culture), 350R (Topic 11). Partially fulfills legislative requirement for American history.

**Topic 12: History of Black Entrepreneurship in the United States.** Same as African and African Diaspora Studies 374D (Topic 2: History of Black Entrepreneurship in the United States). Only one of the following may be counted: African and African Diaspora Studies (Topic 2), History 350L (Topic 53: History of Black Entrepreneurship in the United States), 350R (Topic 12). Partially fulfills legislative requirement for American history.

**Topic 13: History of Sexuality in America.** Same as Women's and Gender Studies 345 (Topic 38: History of Sexuality in America). Only one of the following may be counted: History 350L (Topic 55: History of Sexuality in America), 350R (Topic 13), Women's and Gender Studies 345 (Topic 38). Partially fulfills legislative requirement for American history.

**Topic 14: Gender and Slavery in the United States.** Same as African and African Diaspora Studies 372C (Topic 4: Gender and Slavery in the United States) and Women and Gender Studies 345, (Topic 31: Gender and Slavery in the United States). Examines the gendered experience of chattel slavery in the United States. Includes critical analysis of classic and contemporary texts, films, and songs that focus on slave labor, family, community, sexuality, and the economy. Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 4), 374D (Topic: Gender and Slavery in the United States), History 350L (Topic: Gender and Slavery in the United States), 350R (Topic 14), Women's and Gender Studies 340 (Topic: Gender and Slavery in the United States), 345 (Topic 31). Partially fulfills legislative requirement for American history.

**Topic 15: Thomas Jefferson and His World.** Examination of the public and private Jefferson: author of the Declaration of Independence, governor of Virginia, secretary of state during the Washington administration, third president of the United States, master of Monticello, and owner of nearly three hundred people.

**Topic 16: Innovation in the United States Economy.** Examines creativity in the United States' economy, primarily since 1865. Includes major innovations associated with the evolution of the economy, such as the development of branding and the coming of the computer industry.



**Topic 17: Black Women in America.** Same as African and African Diaspora Studies 374D (Topic 9: Black Women in America) and Women's and Gender Studies 340 (Topic 9: Black Women in America). Uses primary sources, historical monographs, and essays to provide a chronological and thematic overview of the experiences of black women in America from their African roots to the circumstances they face in the present era. Only one of the following may be counted: African and African Diaspora Studies 374D (Topic 9) History 350L (Topic: Black Women in America), 350R (Topic 17), Women's and Gender Studies 340 (Topic 9). Partially fulfills legislative requirement for American history.

**Topic 18: Women in Sickness and Health.** Same as Women's and Gender Studies 345 (Topic 3: Women in Sickness and Health). Explores medical and biological views throughout the nineteenth and twentieth centuries of women and women's health, the social context of those views, the development of medical practices, and the treatment of illness and debility. Only one of the following may be counted: History 350L (Topic: Women in Sickness and Health), 350R (Topic 18), Women's and Gender Studies 345 (Topic 3). Partially fulfills legislative requirement for American history.

**Topic 19: American Popular Culture, 1682-Present.** Same as American Studies 370 (Topic 35: American Popular Culture, 1682-Present) and Women's and Gender Studies 340 (Topic 26: American Popular Culture, 1682-Present). Explores the evolution of American popular culture and its relationship to national consolidation, and at times, disunion, over the last 330 years. Partially fulfills legislative requirement for American history.

#### **HIS 351D. The Hellenistic Age: Alexander to Actium.**

Same as Ancient History and Classical Civilization 325 (Topic 6: The Hellenistic Age: Alexander to Actium) and Classical Civilization 351D. History of Asia, Egypt, and the Mediterranean world from Alexander's expedition to Asia to Rome's defeat of the last of the Hellenistic monarchs at Actium (ca. 334 to 31 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 351N. The History of Religion in America to 1800.**

Same as Religious Studies 327. Survey of religious thought, practices, and institutions in the colonies and early republic. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 351P. History of Religion in America since 1800.**

Same as Religious Studies 326. Introduction to the history of religion in the United States of America from the nineteenth century to the present. Focuses on how diverse peoples imagined and transformed the landscape, interacted with one another at different sites, and moved within and across national borders. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 352L. The Mexican Revolution, 1910-1920.**

Same as Latin American Studies 366 (Topic 8: The Mexican Revolution, 1910-1920). An analytical examination of the initial decade of the Mexican Revolution, the first of the twentieth-century nationalist social revolutions; examines through lectures and discussion the historical antecedents and the political, economic, social, and intellectual elements of the upheaval. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 353. The French Revolution and Napoleon.**

Analysis of the social, political, and economic origins and outcomes of the French Revolution and Napoleon's empire. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 354C. History of Greece to the End of the Peloponnesian War.**

Same as Ancient History and Classical Civilization 325 (Topic 4: History of Greece to the End of the Peloponnesian War) and Classical Civilization 354C. Survey of Greek history from the emergence of the city-states through the end of the Peloponnesian War (ca. 700 to 404 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 354D. History of Greece to 146 BC.**

Same as Ancient History and Classical Civilization 325 (Topic 5: History of Greece to 146 BC) and Classical Civilization 354D. Survey of Greek history from the end of the Peloponnesian War to the defeat of Greece by Rome (404 to 146 BC). Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 354N. France in Modern Times.**

The impact of revolution on French political, economic, and social development in the nineteenth and twentieth centuries. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **HIS 355F. The United States, 1877-1920.**

Examines the Gilded Age and Progressive Era to depict the rise of modern America. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 355M. The United States, 1920-1941.**

Same as American Studies 358. A history of political, economic, diplomatic, military, social, and cultural developments in the United States between the two world wars. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 355N. Main Currents of American Culture to 1865.**

Same as American Studies 355. Traces the development of American culture and society from the colonial era until the end of the Civil War. Major themes include racial conflict, religion, slavery, the development of democracy, and cultural reform. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 355P. The United States since 1941.**

A history of political, economic, diplomatic, social, and cultural developments in the United States since the nation's entry into World War II. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

#### **HIS 355S. United States Constitutional History.**

A lecture and discussion course dealing with the history of the development of the American constitutional tradition from colonial times to the present. Three lecture hours a week for one semester. History 355S and 366N (Topic: United States Constitutional History)



may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 356G. History of the United States West.**

Examines the history of the trans-Mississippi West with a special focus on the concepts of conquest, resistance, and region from the nineteenth to the twentieth century. Three lecture hours a week for one semester. History 356G and 365G (Topic: History of the United States West) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 356K. Main Currents of American Culture since 1865.**

Same as American Studies 356. Traces the development of American culture and society from the end of the Civil War to the present. Major themes include racial conflict, pluralism, religion, urban development and reform, modernism, government centralization, cultural radicalism, and the rebirth of conservatism. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 356N. American Culture and Social Life since 1945.**

Same as American Studies 328. Study of postwar American culture and society, using novels, plays, movies, music, television, journalism, political thought, and social criticism; special attention to the 1950s. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 356P. The United States in the Civil Rights Era.**

Examines United States history in the post-World War II era, including how civil rights and other racial issues helped shape the politics, popular culture, and social life of this period. Three lecture hours a week for one semester. History 356P and 365G (Topic: United States in the Civil Rights Era) may not both be counted. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 356R. America and the Holocaust.**

Same as American Studies 321 (Topic 4: America and the Holocaust) and Jewish Studies 365 (Topic 1: America and the Holocaust). Three lecture hours a week for one semester. Only one of the following may be counted: American Studies 321 (Topic 4), 370 (Topic: America and the Holocaust), History 350L (Topic: America and the Holocaust), 356R, 365G (Topic: America and the Holocaust), Jewish Studies 361 (Topic: America and the Holocaust), 365 (Topic 1), Liberal Arts Honors 350 (Topic: America and the Holocaust). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 357C. African American History to 1860.**

Same as African and African Diaspora Studies 357C and American Studies 321E. Review of West African origins; New World settlement patterns, social life, and culture; discussion of the Atlantic slave trade, the development of capitalism and plantation slavery, and the origins of racism. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 357C, American Studies 321 (Topic: African American History to 1860), 321E, History 357C. Partially fulfills legislative requirement for American History. Prerequisite: Upper-division standing.

### **HIS 357D. African American History since 1860.**

Same as American Studies 321F, African and African Diaspora Studies 357D, and Urban Studies 353 (Topic 1: African American

History since 1860). Survey of the history of African Americans in the United States from 1860 to the present: Emancipation, Reconstruction politics, migration and urbanization, and the evolution of African American culture; kinds of sources and methods valuable for analyzing African American life and culture. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 357D, American Studies 321 (Topic: African American History since 1860), 321F, History 357D, Urban Studies 353 (Topic 1). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 357F. Filipinos in the United States.**

Same as Asian American Studies 325 (Topic 1: Filipinos in the United States). Three lecture hours a week for one semester. Only one of the following may be counted: Asian American Studies 325 (Topic 1), History 357F, 365G (Topic: Filipinos in the United States), 366N (Topic: Filipinos in the United States). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 357P. Twentieth-Century American Indian History.**

Studies American Indian life and culture in the twentieth century through the use of historical and anthropological texts, autobiographies, films, and fiction. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 358M. History of Britain from 1783 through World War I.**

Same as European Studies 346 (Topic 1: History of Britain from 1783 through World War I). Surveys the political, social, economic, and intellectual history of Great Britain from the years preceding the outbreak of the French Revolution to the conclusion of World War I. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 346 (Topic 1), 361 (Topic 4: England in the Nineteenth Century), History 358M. Prerequisite: Upper-division standing.

### **HIS 358Q. Supervised Research.**

Individual instruction. Prerequisite: Upper-division standing.

### **HIS 359N. History of Africa since 1800.**

Same as African and African Diaspora Studies 359N. Development of sub-Saharan Africa from the end of the slave trade to independence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 359P. History of East Africa.**

Same as African and African Diaspora Studies 345. A survey of the history of Kenya, Tanzania, and Uganda from prehistoric times to the postindependence era. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 359R. History of West Africa.**

Same as African and African Diaspora Studies 345C. A history of the West Africa region: the rise and fall of kingdoms, relations with Europe and Asia, the great revolutions of the nineteenth century, colonial administration, decolonization, and the search for economic development and political stability since independence. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 362G. Topics in European History.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Reformation Theology.** Same as Germanic Civilization 360E (Topic 1: Reformation Theology) and Religious Studies 355D. Prerequisite: Upper-division standing.

**Topic 2: Vienna: Memory and the City.** Same as American Studies 370 (Topic 41: Vienna: Memory and the City), European Studies 346 (Topic 5: Vienna: Memory and the City), and Urban Studies 354 (Topic 7: Vienna: Memory and the City). Examines the ways in which cultural memory has shaped, and continues to shape, urban life in Vienna, Austria. Only one of the following may be counted: American Studies 315 (Topic: Vienna: Memory and the City), 370 (Topic 41), European Studies 301 (Topic: Vienna: Memory and the City), 306 (Topic: Vienna: Memory and the City), 346 (Topic 5), Geography 309 (Topic: Vienna: Memory and the City), Germanic Civilization 311 (Topic: Vienna: Memory and the City), History 306N (Topic: Vienna: Memory and the City), 362G (Topic 2), Urban Studies 305 (Topic: Vienna: Memory and the City), 354 (Topic 7).

### **HIS 362K. Medieval Civilization.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **HIS 363K. Topics in Latin American History.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **HIS 364G. Topics in African, Asian, and Middle Eastern History.**

May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: History of Hindu Religious Traditions.** Same as Anthropology 324L (Topic 23: History of Hindu Religious Traditions), Asian Studies 340 (Topic 4: History of Hindu Religious Traditions), and Religious Studies 321. History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change.

**Topic 2: Prophet of Islam: His Life and Times.** Same as Islamic Studies 340 (Topic 1: Prophet of Islam: His Life and Times) and Religious Studies 325. A detailed study of the prophet Muhammad's life and message, and of the means by which his life was recorded and popularized. Only one of the following may be counted: History 364G (Topic 2), Islamic Studies 340 (Topic 1), Middle Eastern Studies 321K (Topic 6: Prophet of Islam: His Life and Times), Religious Studies 325.

**Topic 3: The Dead Sea Scrolls.** Same as Jewish Studies 364 (Topic 4: The Dead Sea Scrolls), Middle Eastern Studies 342 (Topic 23: The Dead Sea Scrolls), and Religious Studies 353D. Only one of the following may be counted: History 364G (Topic 3), Jewish Studies 361 (Topic 4: The Dead Sea Scrolls), 364 (Topic 4), Middle Eastern Studies 320 (Topic 13: The Dead Sea Scrolls), 342 (Topic 23), Religious Studies 353D.

### **HIS 365G. Topics in United States History.**

Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **HIS 366N. Topics in History.**

Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

### **HIS 372L. Proseminar in Historical Source Readings.**

Individual instruction in reading history and historiography. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor; consent forms are available in the departmental advising office.

### **HIS 372M. Proseminar in Historical Writing.**

Individual instruction in historical research and writing. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and written consent of instructor; consent forms are available in the departmental advising office.

### **HIS 373C. History of the Hip-Hop Generation.**

Same as African and African Diaspora Studies 372E (Topic 3: History of the Hip-Hop Generation). Explores the evolution of the hip-hop generation through the lens of music, culture, and politics of black America after the civil rights movement. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 3), 374F (Topic 5: History of the Hip-Hop Generation), History 365G (Topic: History of the Hip-Hop Generation), 373C. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **HIS 375D. Islamic Spain and North Africa to 1492.**

Same as Middle Eastern Studies 343 (Topic 4: Islamic Spain and North Africa to 1492) and Religious Studies 345. An introduction to the impact of Islam on Spain and North Africa, with emphasis on social, economic, and cultural development. Three lecture hours a week for one semester. Only one of the following may be counted: Ancient History and Classical Civilization 330 (Topic: Islamic Spain and North Africa to 1492), History 375D, Islamic Studies 373 (Topic: Islamic Spain and North Africa to 1492), Middle Eastern Studies 321K (Topic 4: Islamic Spain and North Africa to 1492), 343 (Topic 4), Religious Studies 345, 363 (Topic: Islamic Spain and North Africa to 1492). Prerequisite: Upper-division standing.

### **HIS 375K. Tudor England, 1485-1603.**

Exploration of the most important political, religious, social, economic, and intellectual changes that occurred in England between the accession of Henry VII and the death of Elizabeth I. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 375L. Stuart England, 1603-1689.**

Topical lecture course focusing on the most significant political, religious, social, economic, and cultural developments in seventeenth-century England. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 375M. Modern Spain, 1800 to the Present.**

Political, social, and economic changes in the nineteenth century: the Second Republic; the Spanish Civil War; the Franco Era and the transition to democracy after 1975. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HIS 376F. The United States and the Second World War.**

Restricted to students in the Normandy Scholars Program. Three lecture hours a week for one semester, and approximately three weeks of study in France. Partially fulfills legislative requirement for American history.

### **HIS 376G. Hitler, Nazism, and World War II.**

Restricted to students in the Normandy Scholars Program. Three lecture hours a week for one semester, and approximately three weeks of study in France.

### **HIS 679H. Honors Tutorial Course.**

An individual instruction course to provide training in the methods and teaching of historical research and writing. The equivalent of three semester hours a week for two semesters. May not be included in the thirty semester hours of coursework required for the major. Prerequisite: For 679HA, upper-division standing and admission to the History Honors Program; for 679HB, History 679HA.

## **Humanities Program**

### **Humanities: HMN**

#### **Lower-Division Courses**

##### **HMN 101. Community Service.**

Tutorial course, in which the student submits a report based on a community service project and appropriate supplementary reading. Conference course. Prerequisite: Consent of the humanities adviser.

##### **HMN 305. Freshman Seminar.**

Reading, discussion, writing, and oral reporting on various humanities topics. Three lecture hours a week for one semester. Humanities 305 and Liberal Arts Honors 305 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Advanced placement credit for Rhetoric and Writing 306 or the equivalent.

**Topic 1: Epic Journeys.** Offered on the pass/fail basis only.

##### **HMN 110, 210, 310. Internship.**

Students work in a professional environment, applying analytical, communication, and other academic skills to practical work. For each semester hour of credit earned, one lecture hour and ten hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Consent of the humanities director.

##### **HMN 116, 216, 316. Topics in the Humanities.**

Intensive lecture or seminar course addressing topics in various disciplines in the humanities. One, two, or three lecture hours a week for one semester. Some topics are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Consent of the humanities adviser.

##### **HMN 318Q. Supervised Research.**

Individual instruction. Prerequisite: Consent of the humanities adviser.

## **Upper-Division Courses**

### **HMN 321. Humanism and Western Civilization: The Ancient World.**

A history of humanism in ancient Greece and Rome. The contributions of humanism to the values we place on the individual and human potential, democratic government, the arts, religion, and the family. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **HMN 322. Humanism and Western Civilization: The Renaissance.**

A history of humanism during the European Renaissance, the thirteenth through the sixteenth century. The contributions of humanism to the values we place on the individual and human potential, democratic government, the arts, religion, and the family. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **HMN 323. Humanism and Western Civilization: The Enlightenment.**

A history of humanism during the Enlightenment. The contributions of humanism to the values we place on the individual and human potential, democratic government, the arts, religion, and the family. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **HMN 125K. The Arts, Sciences, and Social Sciences.**

Analysis of topics in the arts, sciences, and social sciences through reading, discussion, and lectures. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Consent of the humanities adviser.

### **HMN 350. Topics in the Humanities.**

Study of the values underlying humanistic disciplines. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: A University grade point average of at least 3.50.

#### **Topic 2: Daily Life in Northern Europe.**

#### **Topic 3: Geography and Religion.** Same as Geography 358E.

Ideas about the relationships among the natural world, myth, and ritual; principal focus on Christianity, Islam, and Judaism and their offshoots and antagonists in the Western world. Only one of the following may be counted: Geography 358E, Humanities 350 (Topic 3), Middle Eastern Studies 322K (Topic 15: Geography and Religion). Additional prerequisite: Upper-division standing.

**Topic 4: Reading Images: Icons and Beliefs.** The content (not the aesthetics or the technical, compositional features) of selected Renaissance paintings, sculptures, and prints. Additional prerequisite: Upper-division standing.

**Topic 5: Great Trials in Western History.** The intellectual and historical importance of a variety of significant trials in Western history. Humanities 350 (Topic 5) and Liberal Arts Honors 350 (Topic: Great Trials in Western History) may not both be counted. Offered on the letter-grade basis only.

**Topic 6: In Search of Meaning.** Humanities 350 (Topic: The Quest for Meaning) and 350 (Topic 6) may not both be counted.

**Topic 7: The Enlightenment.** Offered on the letter-grade basis only.

**Topic 8: Sites, Structures, and Images of Italy.** Examination of the historical factors of religion, politics, economics, and local culture that define the significance of selected late medieval and

Renaissance (twelfth through fifteenth century) buildings and the visual art they formerly housed and displayed. Taught in Italy.  
Additional prerequisite: Upper-division standing and consent of instructor.

### **HMN 358Q. Supervised Research.**

Individual instruction. May be repeated for credit. Prerequisite: Consent of the humanities adviser.

### **HMN 370. Senior Tutorial Course.**

A tutorial program of supervised reading and writing, including an individual paper or papers in which the student draws together the central directions and discoveries of his or her studies in the humanities. Three lecture hours a week for one semester. Humanities 370 and 679HB may not both be counted. Prerequisite: Consent of the humanities adviser.

### **HMN 379. Conference Course.**

Individual instruction in a topic approved by the instructor and the humanities adviser. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of the humanities adviser.

### **HMN 679H. Honors Tutorial Course.**

Directed reading and research, followed by the writing of a report or the creation of a project. Conference course for two semesters. Humanities 370 and 679HB may not both be counted. Prerequisite: For 679HA, admission to the Humanities Honors Program and consent of the humanities adviser; for 679HB, Humanities 679HA.

## **International Relations and Global Studies Program**

### **International Relations and Global Studies: IRG**

#### **Lower-Division Courses**

#### **IRG 301. Introduction to International Relations and Global Studies.**

Introduction to the areas related to international relations. Three lecture hours a week for one semester.

#### **Upper-Division Courses**

#### **IRG 320F. Foundations of International Relations and Global Studies.**

Survey of the international relations and global studies major tracks to introduce distinctive concepts and central themes. The equivalent of three lecture hours a week for one semester. Prerequisite: Upper-division standing and International Relations and Global Studies 301.

#### **IRG 378. Capstone Research in International Relations and Global Studies.**

Restricted to international relations and global studies majors. Three lecture hours a week for one semester. Prerequisite: Completion of at least seventy-five semester hours of coursework, and International Relations and Global Studies 301.

### **IRG 678H. Honors Tutorial Course.**

Supervised individual research on an international relations and global studies topic. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 678HA, upper-division standing, International Relations and Global Studies 301 with a grade of at least B, and admission to the International Relations and Global Studies Honors Program; for 678HB, International Relations and Global Studies 678HA.

## **Schusterman Center for Jewish Studies**

### **Jewish Studies: J S**

#### **Lower-Division Courses**

#### **J S 301. Introduction to Jewish Studies.**

Jewish literature and Jewish thought, comprising a general introduction to biblical, rabbinic, philosophic, and literary Jewish texts from the sixth century BC to the twenty-first century CE. Emphasis on hermeneutics (interpretation). Three lecture hours a week for one semester.

#### **J S 304M. Jewish Civilization: Beginnings to 1492.**

Same as History 306N (Topic 10: Jewish Civilization: Beginnings to 1492) and Religious Studies 313M. Introduction to the history, culture, and religion of the Jewish people from around 1000 BC to the end of the medieval period. Subjects may include ancient Israel, late Second Temple sectarianism, the rise of Christianity, rabbinic Judaism, medieval Jewish philosophy, Jewish mysticism, and Hebrew poetry. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic: Jewish Civilization I), 306N (Topic 10), Jewish Studies 304M, 311 (Topic: Jewish Civilization I), Religious Studies 313 (Topic: Jewish Civilization I), 313M.

#### **J S 304N. Jewish Civilization: 1492 to the Present.**

Same as History 306N (Topic 11: Jewish Civilization: 1492 to the Present) and Religious Studies 313N. Subjects may include trends toward secularization, the emancipation of European Jewry, the emergence of American Jewry, the Holocaust, the establishment of the State of Israel, and the Arab-Israeli conflict. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic 11), Jewish Studies 304N, 311 (Topic: Jewish Civilization: 1492 to the Present), Religious Studies 313 (Topic: Jewish Civilization: 1492 to the Present), 313N.

#### **J S 311. Topics in Jewish Studies.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary.

#### **Topic 2: Judaism, Christianity, and Islam: An Introduction.**

Same as History 304R, Islamic Studies 311 (Topic 2: Judaism, Christianity, and Islam: An Introduction), and Religious Studies 304. Examines the intertwined historical developments of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims.

**Topic 3: The Rise of Christianity.** Introduction to the origins and development of Christianity.



## Upper-Division Courses

### J S 361. Topics in Jewish Studies.

Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### J S 362. Independent Research in Jewish Studies.

Tutorially directed research in Jewish studies. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### J S 363. Topics in the Humanities and Arts.

Three lecture hours a week for one semester; additional hours may be required for some topics. Jewish Studies 361 and 363 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Anne Frank and Beyond.** Prerequisite: Upper-division standing.

**Topic 3: Film Adaptations of Israeli Literature.** Prerequisite: Upper-division standing.

**Topic 4: Israeli and American Jewish Fiction.** Prerequisite: Upper-division standing.

**Topic 6: Key Yiddish Novels.** Prerequisite: Upper-division standing.

**Topic 7: Love and the State in Contemporary Israeli Literature.** Same as Middle Eastern Languages and Cultures 321 (Topic 6: Love and the State in Contemporary Israeli Literature), and Middle Eastern Studies 342 (Topic 6: Love and the State in Contemporary Israeli Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: Love and State in Contemporary Israeli Literature), English 322 (Topic: Love and State in Contemporary Israeli Literature), Hebrew 374 (Topic 9: Love and the State in Contemporary Israeli Literature), Jewish Studies 363 (Topic 7), Middle Eastern Languages and Cultures 321 (Topic 6), Middle Eastern Studies 322K (Topic 27: Love and the State in Contemporary Israeli Literature), 342 (Topic 6), Women's and Gender Studies 340 (Topic: Love and State in Contemporary Israeli Literature). Prerequisite: Upper-division standing.

**Topic 8: Mizrahi Writing in Israel.** Same as Hebrew 346 (Topic 9: Mizrahi Writing in Israel) and Middle Eastern Studies 342 (Topic 9: Mizrahi Writing in Israel). Only one of the following may be counted: Hebrew 346 (Topic 9), Jewish Studies 363 (Topic 8), Middle Eastern Studies 325 (Topic 6: Mizrahi Writing in Israel), 342 (Topic 9). Prerequisite: Upper-division standing, and Hebrew 412L (or 312L) or 320L with a grade of at least C.

**Topic 10: The Sacred and the Secular in Contemporary Jewish Literature.** Same as Middle Eastern Languages and Cultures 321 (Topic 8: The Sacred and the Secular in Contemporary Jewish Literature) and Middle Eastern Studies 342 (Topic 8: The Sacred and the Secular in Contemporary Jewish Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: The Sacred and the Secular in Contemporary Jewish Literature), English 322 (Topic: The Sacred and the Secular in Contemporary Jewish Literature), Hebrew 374 (Topic 11: The Sacred and the Secular in Contemporary Jewish Literature), Jewish Studies 363 (Topic 10), Middle Eastern Languages and Cultures 321 (Topic 8), Middle Eastern Studies 322K (Topic 28: The Sacred and the Secular in Contemporary Jewish Literature), 342 (Topic 8), Religious Studies 353 (Topic: The Sacred and the Secular in Contemporary Jewish Literature). Prerequisite: Upper-division standing.

**Topic 11: Women's Narratives of the Holocaust and World War II.** Prerequisite: Upper-division standing.

**Topic 12: Yiddish Literature.** Prerequisite: Upper-division standing.

**Topic 13: Jewish-American-European Fiction: The Case of Roth, Roth, and Roth.** Prerequisite: Upper-division standing.

**Topic 17: Introduction to Israeli Literature.** Same as Middle Eastern Languages and Cultures 321 (Topic 5: Introduction to Israeli Literature) and Middle Eastern Studies 342 (Topic 5: Introduction to Israeli Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: Introduction to Israeli Literature), English 322 (Topic: Introduction to Israeli Literature), Hebrew 374 (Topic 10: Introduction to Israeli Literature), Jewish Studies 363 (Topic 17), Middle Eastern Languages and Cultures 321 (Topic 5), Middle Eastern Studies 325 (Topic 7: Introduction to Israeli Literature), 342 (Topic 5). Prerequisite: Upper-division standing.

**Topic 18: Jerusalem in Israeli Literature.** Same as Hebrew 346 (Topic 8: Jerusalem in Israeli Literature). Prerequisite: Upper-division standing and Hebrew 412L (or 312L).

**Topic 19: Postmodernist Israeli Literature.** Same as Middle Eastern Languages and Cultures 321 (Topic 7: Postmodernist Israeli Literature) and Middle Eastern Studies 342 (Topic 7: Postmodernist Israeli Literature). Study of the first decades of Israeli literature. Themes include the establishment of a new state in the aftermath of the Holocaust, conflict between Israel and Arab nations, and conflict between Israelis and Palestinians. Only one of the following may be counted: Comparative Literature 323 (Topic: Postmodernist Israeli Literature), English 322 (Topic: Postmodernist Israeli Literature), Hebrew 374 (Topic 8: Postmodernist Israeli Literature), Jewish Studies 363 (Topic 19), Middle Eastern Languages and Cultures 321 (Topic 7), Middle Eastern Studies 325 (Topic: Postmodernist Israeli Literature), 342 (Topic 7). Prerequisite: Upper-division standing.

### J S 364. Topics in History.

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Anti-Semitism in History and Literature.** Jewish Studies 361 (Topic: Anti-Semitism in History and Literature) and 364 (Topic 1) may not both be counted. Prerequisite: Upper-division standing.

**Topic 2: The Jewish Experience in the Greco-Roman World.** Prerequisite: Upper-division standing.

**Topic 3: The Bible and History.** Same as Religious Studies 354D. The critical uses of biblical and extrabiblical data in the reconstruction of the history of the biblical period. Only one of the following may be counted: Ancient History and Classical Civilization 330 (Topic: The Bible and History), History 372P, Jewish Studies 364 (Topic 3), Middle Eastern Studies 320 (Topic 3: The Bible and History), Religious Studies 354D. Prerequisite: Upper-division standing.

**Topic 4: The Dead Sea Scrolls.** Same as History 364G (Topic 3: The Dead Sea Scrolls), Middle Eastern Studies 342 (Topic 23: The Dead Sea Scrolls), and Religious Studies 353D. Only one of the following may be counted: History 364G (Topic 3), Jewish Studies 361 (Topic 4: The Dead Sea Scrolls), 364 (Topic 4), Middle Eastern Studies 320 (Topic 13: The Dead Sea Scrolls), 342 (Topic 23), Religious Studies 353D. Prerequisite: Upper-division standing.

### **J S 365. Topics in the Social Sciences.**

Three lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: America and the Holocaust.** Same as American Studies 321 (Topic 4: America and the Holocaust) and History 356R. Only one of the following may be counted: American Studies 321 (Topic 4), 370 (Topic: America and the Holocaust), History 350L (Topic: America and the Holocaust), 356R, 365G (Topic: America and the Holocaust), Jewish Studies 361 (Topic: America and the Holocaust), 365 (Topic 1), Liberal Arts Honors 350 (Topic: America and the Holocaust). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

**Topic 2: Concepts in Judaic Culture.** Prerequisite: Upper-division standing.

**Topic 3: Jewish Communities in the Middle East and North Africa.** Prerequisite: Upper-division standing.

**Topic 4: Jewish Immigrant Culture in America.** Prerequisite: Upper-division standing.

**Topic 5: Jewish Ethics.** Prerequisite: Upper-division standing.

**Topic 7: Rome and Jerusalem.** Same as Ancient History and Classical Civilization 325 (Topic 3: Rome and Jerusalem), History 321G, Middle Eastern Studies 342 (Topic 21: Rome and Jerusalem), and Religious Studies 365 (Topic 1: Rome and Jerusalem). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Ancient History and Classical Civilization 325 (Topic 3), Classical Civilization 348 (Topic: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7), Middle Eastern Studies 320 (Topic 2: Rome and Jerusalem), 342 (Topic 21), Religious Studies 365 (Topic 1), Urban Studies 353 (Topic: Rome and Jerusalem). Prerequisite: Upper-division standing.

### **J S 375. Senior Seminar.**

Intensive study and research on selected topics in Jewish studies, with on-going, in-class presentations for critique by fellow students and the instructor. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and consent of the Jewish studies adviser.

### **J S 679H. Honors Tutorial Course.**

Restricted to Jewish studies majors. Supervised individual reading and research for one semester, followed by writing a substantial honors thesis during the second semester. Conference course for two semesters. Prerequisite: For 679HA, admission to the Jewish Studies Honors Program; for 679HB, Jewish Studies 679HA.

## **Teresa Lozano Long Institute of Latin American Studies**

### **Latin American Studies: LAS**

#### **Lower-Division Courses**

#### **LAS 301. Key Ideas and Issues in Latin America.**

Same as History 306N (Topic 3: Key Ideas and Issues in Latin America). Broad introductory course to acquaint students with the main

areas of interest in Latin American studies. Three lecture hours a week for one semester.

#### **LAS 310. General Topics in Latin American Studies.**

Topics that serve as an introduction to Latin America within the framework of different disciplines. Three lecture hours or two lecture hours and one discussion hour a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Latin American Civilization: The Colonial Experience.** Same as History 310K. A broad survey of the political, economic, social, and cultural aspects of the Latin American past, stressing both that area's achievements and its enduring problems. Only one of the following may be counted: History 310K, 346K, Latin American Studies 310 (Topic 1), 366 (Topic 2: Latin America before 1810).

**Topic 2: Latin American Civilization: The National Experience.** Same as History 310L. A broad survey of the political, social, and cultural aspects of the Latin American past. Only one of the following may be counted: History 310L, 346L, Latin American Studies 310 (Topic 2), 366 (Topic 3: Latin America since 1810).

**Topic 3: Introduction to Mesoamerican Archaeology.** Same as Anthropology 314C. Introduction to ancient Mesoamerica from the time of emerging social inequality in the formative period until the Spanish conquest of Mexico-Tenochtitlan in the sixteenth century. Only one of the following may be counted: Anthropology 310L (Topic 1: Introduction to Mesoamerican Archaeology), 314C, Latin American Studies 310 (Topic 3).

**Topic 4: Anthropology of Latin America.** Same as Anthropology 310L (Topic 3: Anthropology of Latin America). Provides a framework for understanding contemporary concerns in Latin America.

#### **LAS 319. Geography of Latin America.**

Same as Geography 319. Adaptations to population growth and spatial integration in cultural landscapes of great natural and ethnic diversity; problems of frontiers and cities. Three lecture hours a week for one semester.

#### **LAS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Latin American Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in Latin American studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **LAS 322. Topics in Latin American Studies.**

Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. Additional hours are required for some topics; these topics are identified in the Course Schedule. Latin American Studies 322 and 330 may not both be counted unless the topics vary; Latin American Studies 322 and 370P may not both be counted unless the topics vary; Latin American Studies 322 and 370S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Hispanic Images and Counterimages.** Same as Mexican American Studies 374 (Topic 9: Hispanic Images and Counterimages) and Radio-Television-Film 359S (Topic 1: Hispanic Images and Counterimages). The critical analysis of Hispanic images in media. Three lecture hours and one two-hour film screening a week for one semester. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 2: Latino Audiences.** Same as Mexican American Studies 374 (Topic 10: Latino Audiences) and Radio-Television-Film 365 (Topic 2: Latino Audiences). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 3: Mass Media and Ethnic Groups.** Same as Mexican American Studies 374 (Topic 11: Mass Media and Ethnic Groups) and Radio-Television-Film 365 (Topic 3: Mass Media and Ethnic Groups). Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 4: Feature Writing.** Same as Mexican American Studies 374 (Topic 6: Feature Writing). Procedures in gathering material for feature stories, with stress on newspaper articles; analysis of reader appeal; study of feature story structure; development of style by practice in writing feature stories. Only one of the following may be counted: Journalism 327, Latin American Studies 322 (Topic 4), Mexican American Studies 374 (Topic 6). Prerequisite: Consent of instructor and a passing score on the College of Communication Grammar, Spelling and Punctuation Test.

**Topic 7: International Communication: Third World Issues.** Same as Mexican American Studies 374 (Topic 17: International Communication: Third World Issues) and Radio-Television-Film 342 (Topic 3: Third World Issues). Prerequisite: For radio-television-film majors, upper-division standing; consent of instructor; and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 9: Business in Emerging Markets.** Same as International Business 372 (Topic 2: Business in Emerging Markets) and Middle Eastern Studies 341 (Topic 2: Business in Emerging Markets). Only one of the following may be counted: International Business 372 (Topic 2), Latin American Studies 322 (Topic 9), Middle Eastern Studies 322K (Topic 4: Business in Emerging Markets), 341 (Topic 2). Prerequisite: Upper-division standing.

**Topic 10: Minorities and the Media.** Issues concerning minority or nondominant groups within the United States. Survey of minority communication problems: alienation, fragmentation, media and Internet access; criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Only one of the following may be counted: Journalism 341H, Journalism 340C (Topic 1: Mass Media and Minorities), Latin American Studies 322 (Topic 10), Mexican American Studies 374 (Topic 22: Minorities and the Media), Urban Studies 354 (Topic: Mass Media and Minorities), Women's

and Gender Studies 340 (Topic 21: Minorities and the Media). Prerequisite: Upper-division standing.

**Topic 11: Narrative Journalism.** Three lecture hours and three laboratory hours a week for one semester. Only one of the following may be counted: Journalism 335, Latin American Studies 322 (Topic 11: Latino Community Journalism), 322 (Topic 11: Narrative Journalism), Mexican American Studies 374 (Topic 4: Latino Community Journalism), 374 (Topic 4: Narrative Journalism). Prerequisite: Upper-division standing and consent of instructor.

**Topic 12: Latinos and Media.** Same as Mexican American Studies 374 (Topic 24: Latinos and Media) and Radio-Television-Film 365 (Topic 6: Latinos and Media). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 13: Latin American Theatre and Drama.** Same as Theatre and Dance 357T (Topic 1: Latin American Theatre and Drama). Prerequisite: Upper-division standing and consent of instructor.

**Topic 14: Journalism in Latin America.** Same as Journalism 367E. Study of the practice of journalism in Latin America. Survey of the region, including historical, political, economic, cultural, ethnic, and geographical aspects. Prerequisite: Upper-division standing and a major in journalism, or consent of instructor.

**Topic 15: Indigenous Languages of the Americas.** Same as Linguistics 350 (Topic 6: Indigenous Languages of the Americas). Examines various aspects of languages in the Americas, including their linguistic structures, the cultural domains in which they exist, and their histories of language contact and change. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **LAS 324L. Topics in Latin American Anthropology.**

Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Indians of Mexico and Guatemala.** Same as Anthropology 322M (Topic 5: Indians of Mexico and Guatemala). Prerequisite: Upper-division standing.

**Topic 10: The Civilization of the Maya.** Same as Anthropology 360K. Maya prehistory and history: the archaeological record, codices and inscriptions, and Spanish conquest writings. Prerequisite: Upper-division standing.

**Topic 11: The Civilizations of Ancient Mexico.** Same as Anthropology 361K. Mexican cultures from earliest prehistory to the European conquest. Prerequisite: Anthropology 302 and six semester hours of upper-division coursework in social science.

**Topic 13: Colonial Latin American Archaeology.** Same as Anthropology 327D. Focuses on the Spanish colonies in Latin America. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Colonial Latin American Archaeology), 327D, Latin American Studies 324L (Topic 13).

**Topic 14: The Politics of Race and Violence in Brazil.** Same as Anthropology 324L (Topic 37: The Politics of Race and Violence in Brazil) and African and African Diaspora Studies 374E (Topic 2: The Politics of Race and Violence in Brazil). Prerequisite: Upper-division standing.



### LAS 325. Topics in Latin American Sociology.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Society of Modern Mexico.** Same as Sociology 335 and Urban Studies 354 (Topic 2: Society of Modern Mexico). Family, community, industrialization, and urbanization in modern Mexico.

**Topic 2: Social Change in Developing Nations.** Overview of changing social structure in the Third World. Latin American Studies 325 (Topic 2) and Sociology 324K may not both be counted. Prerequisite: Upper-division standing.

**Topic 3: Politics and Culture of Contemporary Mexico.** Same as Mexican American Studies 374 (Topic 28: Politics and Culture of Contemporary Mexico), Government 337M (Topic 5: Politics and Culture of Contemporary Mexico), and Sociology 338M. Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### LAS 326. Topics in Latin American Music.

Three lecture hours a week for one semester, with one laboratory hour a week if required. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Music of Mexico and the Caribbean.** Same as Music 334 (Topic 1: Music of Mexico and the Caribbean). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of Mexico and the Caribbean), 326 (Topic 1), Music 334 (Topic 1). Prerequisite: Upper-division standing.

**Topic 2: Music of Latin America.** Same as Music 334 (Topic 2: Music of Latin America). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of Latin America), 326 (Topic 2), Music 334 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Music of Brazil and Argentina.** Same as Music 334 (Topic 3: Music of Brazil and Argentina). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of Brazil and Argentina), 326 (Topic 3), Music 334 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: Music of the Andean Countries.** Same as Music 334 (Topic 4: Music of Andean Countries). Only one of the following may be counted: Latin American Studies 322 (Topic: Music of the Andean Countries), 326 (Topic 4), Music 334 (Topic 4). Prerequisite: Upper-division standing.

### LAS 327. Topics in Latin American Art History.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Modern Latin American Art.** Same as Art History 341L. Development and sources of twentieth-century art in the Caribbean and Central and South America.

**Topic 2: Modern Art of Mexico.** Same as Art History 341K. Art of the nineteenth and twentieth centuries, particularly muralism and its sources, surrealism, and later movements.

**Topic 3: Mesoamerican Art.** Same as Art History 347L. Mesoamerican art and architectural styles, with emphasis on the function of art in culture.

**Topic 4: Contemporary Latin American Art, 1960 to the Present.** Same as Art History 366N (Topic 1: Contemporary Latin American

Art, 1960 to the Present). Painting, sculpture, media art, and environments.

**Topic 5: Maya Art and Architecture.** Same as Art History 347M. The development and function of art and architectural form in the classic Maya culture.

**Topic 6: Art and Archaeology of Ancient Peru.** Same as Art History 347K. The growth of civilization in South America from the earliest decorated textiles, pottery, and ceremonial buildings to the imperial Inca style.

### LAS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Latin American Studies.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in Latin American studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### LAS 330. Topics in Latin American Geography.

Three lecture hours a week for one semester. Latin American Studies 322 and 330 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Landscapes of Mexico and Caribbean America.** Same as Geography 341K. The natural regions and cultural landscapes of Mexico, Central America, and the West Indies. Prerequisite: Upper-division standing.

**Topic 3: Geography of South America.** Same as Geography 323K. Ecological, cultural, and political challenges of the densely populated margins and sparsely populated interior frontier of South America; appropriate development and conservation pathways. Prerequisite: Upper-division standing.

### LAS 337M. Topics in Latin American Politics.

Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Parties, Elections, and Democracy in Latin America.** Same as Government 337M (Topic 2: Parties, Elections, and Democracy in Latin America). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 3: Politics in South America.** Same as Government 337M (Topic 3: Politics in South America). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 4: United States-Mexican Border Relations.** Same as Mexican American Studies 374 (Topic 14: United States-Mexican Border Relations) and Government 337M (Topic 4: United States-Mexican Border Relations). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 5: Introduction to Latin American Government and Politics.** Same as Government 328L. An introductory survey of Latin American political systems: governmental organization, political processes, and current problems. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 6: Political Development in Eastern Europe and Latin America.** Same as Government 365N (Topic 4: Political Development in Eastern Europe and Latin America). Only one of the following may be counted: Government 365N (Topic 4), Latin American Studies 337M (Topic 6), Russian, East European, and



Eurasian Studies 335 (Topic 7: Political Development in Eastern Europe and Latin America). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 8: Latino Politics.** Same as Mexican American Studies 374 (Topic 15: Latino Politics) and Government 370K (Topic 2: Latino Politics). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 9: The Military in Politics.** Only one of the following may be counted: Government 365N (Topic 3: The Military in Politics); Latin American Studies 337M (Topic 9); Russian, East European, and Eurasian Studies 335 (Topic 10: The Military in Politics). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 10: Political Transition in Europe and Latin America.** Same as Government 365N (Topic 11: Political Transition in Europe and Latin America). Only one of the following may be counted: European Studies 361 (Topic 21: Political Transition in Europe and Latin America), Government 365N (Topic 11), Latin American Studies 337M (Topic 10). Prerequisite: Six semester hours of lower-division coursework in government.

### **LAS 350. Epic of Latin America.**

Introduction to Latin American culture; main topics and debates in Latin American studies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **LAS 351C. Quechua Language and Society in the Andes I.**

Same as Anthropology 351C. Beginning spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 351C, 381C, Latin American Studies 351C, 381C. Prerequisite: Upper-division standing.

### **LAS 351D. Quechua Language and Society in the Andes II.**

Same as Anthropology 351D. Intermediate spoken Quechua; Quechua folklore. Taught in English. Only one of the following may be counted: Anthropology 351D, 381D, Latin American Studies 351D, 381D. Prerequisite: Upper-division standing.

### **LAS 355. Topics in Latin American Economics.**

Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **Topic 1: Development Problems and Policies in Latin America.**

Same as Economics 355 and Urban Studies 351 (Topic 1: Development Problems and Policies in Latin America). Description of the Latin American economy; business and market organization; problem of growth (involving credit, public finance, trade, investment aspects). Prerequisite: Economics 304K and 304L with a grade of at least C- in each.

### **LAS 359H. Honors Seminar.**

An interdisciplinary discussion and writing seminar. Lectures and supervised individual research and writing of a substantial paper on a special topic. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, and consent of instructor and the Latin American studies honors adviser.

### **LAS 366. Topics in Latin American History.**

Topics vary each semester to allow curriculum flexibility for faculty members and visiting scholars. Three lecture hours a week for

one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Colonial Latin America.** Same as History 346K. Basic survey course, designed as an introduction to Latin American history in the colonial period. Only one of the following may be counted: History 310K, 346K, Latin American Studies 310 (Topic 1: Latin American Civilization: The Colonial Experience), 366 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Modern Latin America.** Same as History 346L. Continuation of History 346K and Latin American Studies 366 (Topic 2). Only one of the following may be counted: History 310L, 346L, Latin American Studies 310 (Topic 2: Latin American Civilization: The National Experience), 366 (Topic 3). Prerequisite: Upper-division standing.

**Topic 7: Resistance, Rebellion, and Revolution in Colonial Spanish America.** Same as History 350L (Topic 19: Resistance, Rebellion, and Revolution in Colonial Spanish America). Only one of the following may be counted: History 350L (Topic 19), Latin American Studies 366 (Topic: Resistance, Rebellion, and Revolution in Colonial Spanish America), 366 (Topic 7). Prerequisite: Upper-division standing.

**Topic 8: The Mexican Revolution, 1910-1920.** Same as History 352L. An analytical examination of the initial decade of the Mexican Revolution, the first of the twentieth-century nationalist social revolutions; examines through lectures and discussion the historical antecedents and the political, economic, social, and intellectual elements of the upheaval. Prerequisite: Upper-division standing.

**Topic 9: Revolution in Twentieth-Century Latin America.** Same as History 346S. An introduction to recent Latin American history, with emphasis on phenomena that explain the apparent social unrest and political instability of the region. Only one of the following may be counted: History 346L, 366N (Topic: Revolution in Twentieth-Century Latin America), Latin American Studies 366 (Topic 9). Prerequisite: Upper-division standing.

**Topic 12: Modern Brazil.** Same as History 328M. The social, economic, political, and cultural forces that have shaped modern Brazil. Prerequisite: Upper-division standing.

**Topic 13: Revolution in Modern Latin America.** Same as History 346R. Comparison of the Mexican and Cuban revolutions and of their challenges to inter-American relations. Prerequisite: Upper-division standing.

**Topic 15: History of Modern Central America.** Same as History 350L (Topic 42: History of Modern Central America). Only one of the following may be counted: History 350L (Topic 42), 363K (Topic: History of Modern Central America), Latin American Studies 366 (Topic 15). Prerequisite: Upper-division standing.

**Topic 16: Culture and Identity in Colonial Mexico.** Same as History 350L (Topic 44: Culture and Identity in Colonial Mexico). Prerequisite: Upper-division standing.

**Topic 17: The Cuban Revolution and the United States.** Same as History 346T. The special economic and political relationship between the United States and Cuba from 1898 to 1967; and how the 1959 revolution affected the Cold War relationships between East and West, North and South. Only one of the following may be counted: History 346T, 366N (Topic: The Cuban Revolution and the US), Latin American Studies 366 (Topic: The Cuban Revolution and the US), 366 (Topic 17). Prerequisite: Upper-division standing.

**Topic 18: History of the Caribbean.** Same as History 350L (Topic 62: History of the Caribbean). Overview of Caribbean history from 1492 to the present. Topics include contact between European and native cultures, piracy, slavery, colonialism and decolonization, and revolutions. Prerequisite: Upper-division standing.

**Topic 19: Twentieth-Century Rural Latin America.** Same as History 346V. Examines causes of some of the unresolved

conflicts affecting Latin America today, including the social-agrarian relationships linking landlords and campesinos; the role of the state and the impact of official ideologies involving indigenous people; religion and the Catholic Church; the history of rural institutions; and the success or failure of land reforms. Only one of the following may be counted: History 346V, 363K (Topic: Twentieth-Century Rural Latin America), Latin American Studies 366 (Topic 19). Prerequisite: Upper-division standing.

**Topic 20: Colonial Latin America through Objects.** Same as History 346J. Examines objects, such as paintings, reliquaries, monstrosities, and churches from colonial Latin America in order to understand colonial culture. Includes critical reading of original texts. Only one of the following may be counted: History 346J, 363K (Topic: Colonial Latin America through Objects), Latin American Studies 366 (Topic 20). Prerequisite: Upper-division standing.

**Topic 21: Church and State in Latin America.** Same as History 346W and Religious Studies 368 (Topic 1: Church and State in Latin America). History of Church-state relations and religious politics in modern Latin America, with emphasis on the nineteenth to early twentieth-century periods. Only one of the following may be counted: History 346W, 363K (Topic: Church and State in Latin America), Latin American Studies 366 (Topic 21), Religious Studies 368 (Topic 1). Prerequisite: Upper-division standing.

**Topic 22: Reimagining Cuba, 1868-Present.** Same as History 347C. Explores Cuban-United States relations from the nineteenth century to the present, including issues of empire and transnationalism, and social change engagements between Cuba and the United States before and after the Cuban Revolution. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Reimagining Cuba, 1868-Present), 374E (Topic: Reimagining Cuba, 1868-Present), History 347C, 363K (Topic: Reimagining Cuba, 1868-Present), Latin American Studies 366 (Topic 22). Prerequisite: Upper-division standing.

### **LAS 370P. Topics in Luso-Brazilian Literature, Culture, Civilization, and Linguistics.**

Three lecture hours a week for one semester. Latin American Studies 322 and 370P may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Brazil: An Introduction.** Same as Portuguese 375 (Topic 5: Brazil: An Introduction). Prerequisite: Six semester hours of upper-division coursework in Portuguese.

### **LAS 370S. Topics in Hispanic Literature, Culture, Civilization, and Linguistics.**

Three lecture hours a week for one semester, or as required by the topic. Latin American Studies 322 and 370S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Civilization of Spanish America.** Same as Spanish 322K. Survey of the social and cultural evolution of the Spanish American countries. Conducted in Spanish. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

**Topic 4: Introduction to Spanish American Literature through Modernism.** Same as Spanish 325K. Main literary trends and principal writers in Spanish America from the sixteenth century through Modernism. Conducted in Spanish. Prerequisite: Spanish 611D, 612, or 312L.

**Topic 5: Introduction to Spanish American Literature since Modernism.** Same as Spanish 325L. Main literary trends and principal writers in Spanish America since Modernism. Conducted in Spanish. Prerequisite: Spanish 611D, 612, or 312L.

**Topic 9: Contemporary Spanish American Poetry.** Same as Spanish 364K (Topic 2: Contemporary Spanish American Poetry). Taught in Spanish. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 10: Contemporary Spanish American Prose.** Same as Spanish 365K. Novels, short stories, and essays from different regions of Hispanic America. Taught in Spanish. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 11: Comparative Structure of English and Spanish.** Same as Spanish 367K (Topic 2: Comparative Structure of English and Spanish). Conducted in Spanish. Prerequisite: Spanish 327G, 345L and three additional semester hours of upper-division coursework in Spanish.

**Topic 12: Translation Principles and Practice.** Same as Spanish 367K (Topic 4: Translation Principles and Practice). Conducted in Spanish. Prerequisite: Spanish 327G, 345L, and three additional semester hours of upper-division coursework in Spanish.

**Topic 14: Interpretation Principles and Practice.** Same as Spanish 367K (Topic 5: Interpretation Principles and Practice). Conducted in Spanish. Prerequisite: Spanish 327G, 345L, and three additional semester hours of upper-division coursework in Spanish.

**Topic 15: Literary Translation: Analysis and Criticism.** Same as Spanish 367K (Topic 6: Literary Translation: Analysis and Criticism). Conducted in Spanish. Prerequisite: Spanish 327G, 345L, and three additional semester hours of upper-division coursework in Spanish.

**Topic 16: Writing the Conquest.** Same as Spanish 374K (Topic 1: Writing the Conquest). The forging of Spanish-American civilization and many of its persistent dilemmas seen through the examination of an exuberant and original body of narrative texts. Only one of the following may be counted: Latin American Studies 370S (Topic 16), Spanish 350 (Topic: Writing the Conquest), 374K (Topic 1). Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 17: Indigenous Voices in Latin American Literature.** Same as Spanish 350 (Topic 4: Indigenous Voices in Latin American Literature). Prerequisite: Spanish 322K or 328.

**Topic 19: Business in Hispanic Life and Culture.** Same as Spanish 350 (Topic 10: Business in Hispanic Life and Culture). Prerequisite: Spanish 322K or 328.

**Topic 20: Mexican and Mexican American Ballads.** Same as Mexican American Studies 374 (Topic 29: Mexican and Mexican American Ballads) and Spanish 350 (Topic 11: Mexican and Mexican American Ballads). Examines the corrido genre in the nineteenth and twentieth centuries, with special focus on its pivotal role in the Mexican Revolution and in the collision between cultures in the border zone. Prerequisite: Spanish 322K or 328.

**Topic 22: The Imagined Andes.** Same as Spanish 350 (Topic 12: The Imagined Andes). Overview of literature and culture of the Andean regions. Three lecture hours a week for one semester. Prerequisite: Spanish 322K or 328.

**Topic 23: Violence in Contemporary Mexican Culture.** Same as Spanish 350 (Topic 13: Violence in Contemporary Mexican Culture) and Women's and Gender Studies 340 (Topic 20: Violence in Contemporary Mexican Culture). Studies the representation of violence in contemporary literary and cultural production in Mexico in order to understand social, political, and cultural implications of current violence in that country. Taught in Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

**Topic 24: Gender Issues in Contemporary Latin American Cinema.** Same as Spanish 350K (Topic 1: Gender Issues in

Contemporary Latin American Cinema). Studies Latin American cinema as a device of gender system formation and reinforcement, and as criticism of patriarchal hegemony; discusses questions related to sexuality depicted in Latin American films. Subjects covered include: maternity, prostitution, machismo, children's sexuality, homosexuality, heterosexuality, and gender violence in films from the 1930s to present. Conducted in Spanish. Three lecture hours a week for one semester. Only one of the following may be counted: Latin American Studies 370S (Topic 24), Spanish 350 (Topic: Gender in Contemporary Latin American Cinema), 350K (Topic 1). Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 25: Latin American Film and Culture.** Same as Spanish 350K (Topic 3: Latin American Film and Culture). Overview of Latin American cinema from the silent era to present, with an emphasis on the last forty years. Subjects covered include: the development of the film industry (particularly in Argentina and Mexico in the 1930s and 1940s); the "New Wave" of Latin American cinema in the 1960s; and contemporary trends. Taught in Spanish. Three lecture hours a week for one semester. Only one of the following may be counted: Latin American Studies 370S (Topic 25), Spanish 350 (Topic: Latin American Film and Culture), 350K (Topic 3). Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 26: Latin American Literature and Film.** Same as Spanish 350K (Topic 4: Latin American Literature and Film). Studies, in a broad sense, the connections between Latin American cinema and literature, through extensive readings and in-class movie exhibitions. A number of renowned literary works by Latin American authors and their film versions will be analyzed with a comparative approach. Only one of the following may be counted: Latin American Studies 370S (Topic 26), Spanish 350 (Topic: Latin American Literature and Film), 350K (Topic 4), 352 (Topic: Literature and Cinema in Spanish America). Prerequisite: Spanish 325K, 325L, 326K, or 326L.

#### **LAS 379. Conference Course in Latin American Studies.**

Supervised individual study of selected problems in Latin American studies. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor and the undergraduate adviser in Latin American studies.

#### **LAS 679H. Honors Tutorial Course.**

For honors candidates in Latin American studies. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. Conference course for two semesters. Prerequisite: For Latin American Studies 679HA, Latin American Studies 359H, admission to the Latin American Studies Honors Program, and written consent of the Latin American Studies Honors Program adviser; for 679HB, Latin American Studies 679HA.

## **Department of Linguistics**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **American Sign Language: ASL**

### **Lower-Division Courses**

#### **ASL 601C. Accelerated First-Year American Sign Language.**

Introduction to American Sign Language and its vocabulary and sentence structure. A six-hour course comparable to American Sign Language 506 and 507. Six lecture hours a week for one semester. American Sign Language 601C and 506 may not both be counted. American Sign Language 601C and 507 may not both be counted. Offered on the letter-grade basis only.

#### **ASL 506 (TCCN: SGNL 1501). First-Year American Sign Language I.**

Introduction to American Sign Language. Five lecture hours a week for one semester. American Sign Language 601C and 506 may not both be counted. Offered on the letter-grade basis only.

#### **ASL 507 (TCCN: SGNL 1502). First-Year American Sign Language II.**

American Sign Language vocabulary and basic sentence structure. Five lecture hours a week for one semester. American Sign Language 601C and 507 may not both be counted. Offered on the letter-grade basis only. Prerequisite: American Sign Language 506 with a grade of at least C-.

#### **ASL 611C. Accelerated Second-Year American Sign Language.**

Focuses on developing conversational skills in American Sign Language and introduces American Sign Language literature and folklore. A six-hour course comparable to American Sign Language 312K and 312L. Six lecture hours a week for one semester. American Sign Language 611C and 312K may not both be counted. American Sign Language 611C and 312L may not both be counted. Offered on the letter-grade basis only. Prerequisite: American Sign Language 601C or 507 with a grade of at least C-.

#### **ASL 312K (TCCN: SGNL 2301). Second-Year American Sign Language I.**

Development of conversational skills in American Sign Language. Three lecture hours a week for one semester. American Sign Language 611C and 312K may not both be counted. Offered on the letter-grade basis only. Prerequisite: American Sign Language 601C or 507 with a grade of at least C-.

#### **ASL 312L (TCCN: SGNL 2302). Second-Year American Sign Language II.**

Further development of conversational skills in American Sign Language; introduction to American Sign Language literature and folklore. Three lecture hours a week for one semester. American Sign Language 611C and 312L may not both be counted. Offered on the letter-grade basis only. Prerequisite: American Sign Language 312K with a grade of at least C-.

### **Upper-Division Courses**

#### **ASL 320. Advanced American Sign Language Conversation.**

Advanced development of conversational skills in American Sign Language, with a focus on sophisticated linguistic structures and important issues in deaf studies. Three lecture hours a week for



one semester. Offered on the letter-grade basis only. Prerequisite: American Sign Language 611C or 312L with a grade of at least C-.

### **ASL 326. Sign Languages and Signing Communities.**

Same as Linguistics 350 (Topic 3: Sign Languages and Signing Communities). Examines the grammar of signed languages, their use in signing communities, and the acquisition of signed languages as first languages. No knowledge of American Sign Language is required. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

### **ASL 336. Introduction to Sign Interpreting.**

Introduction to sign interpreting from American Sign Language into English and from English into American Sign Language. Topics include the ethics of interpreting and the problems that arise in interpreting in different social and professional situations. Three lecture hours a week for one semester. Prerequisite: American Sign Language 611C, or credit or registration for American Sign Language 312L.

### **ASL 350. Topics in American Sign Language, Deaf Studies, and Interpreting.**

Three lecture hours a week for one semester. Additional hours may be required for some topics; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **ASL 357. Undergraduate Research.**

Supervised research experience. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and American Sign Language 506 with a grade of at least C-.

## **Linguistics: LIN**

### **Lower-Division Courses**

#### **LIN 306. Introduction to the Study of Language.**

Survey of major areas of linguistics: sound systems, grammatical structures, historical development of languages, language families and linguistic universals, dialect differences and their social significance. Three lecture hours a week for one semester.

#### **LIN 312. Interdisciplinary Approaches to Language.**

An interdisciplinary and multidisciplinary introduction to the manifold aspects of language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### **LIN 313. Language and Computers.**

Natural language processing, including spam filtering, dialogue systems, spelling and grammar correction, forensic linguistics, cryptography, and machine translation. Studies how these systems function, the difficulties in implementing them, and implications of such technologies for society. Three lecture hours a week for one semester. Linguistics 312 (Topic: Language and Computers) and 313 may not both be counted.

#### **LIN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Linguistics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad

adviser in the Department of Linguistics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **LIN 321L. American English.**

Same as English 321L. An overview of the historical development of English in the Americas. Attention to regional, social, and ethnic differences, and their implications for public education. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **LIN 322. Gypsy Language and Culture.**

Linguistic introduction to Romani; relationship to languages of India; history from 280 BC; modern dialects and international standard language; history and culture as reflected in the language. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 372 (Topic 13: Gypsy Language and Culture); Linguistics 322; Russian, East European, and Eurasian Studies 325 (Topic 1: Gypsy Language and Culture).

### **LIN 323L. English as a World Language.**

Same as English 323L. An account of the spread of English around the world; national, social, and regional varieties. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **LIN 325. Introduction to the Study of African American English.**

Same as African and African Diaspora Studies 320 (Topic 1: Introduction to the Study of African American English). African American English: evolution, contemporary styles, comparison with other ethnic dialects; attitudes toward African American English, effects in education, controversy about dialect differences and intellectual abilities. Three lecture hours a week for one semester.

### **LIN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Linguistics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Linguistics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **LIN 340. Automata Theory.**

Introduction to the formal study of automata and of related formal languages. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 341, 341H, Linguistics 340. Prerequisite: Computer Science 336 or consent of instructor.

### **LIN 344K. Phonetics: The Production and Perception of Speech Sounds.**

Articulation and transcription of speech sounds; distinctive feature systems; physiological and acoustical aspects of phonetics; common phonological processes. Three lecture hours a week for one semester. Prerequisite: Linguistics 306.



### **LIN 345. Language Change and Language Variation.**

Three lecture hours a week for one semester. Prerequisite: Linguistics 344K.

### **LIN 350. Special Topics in the Study of Language.**

Nontechnical examination of social, educational, and political problems to which current linguistic knowledge is relevant. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Language and the Brain.** Same as Communication Sciences and Disorders 350. Prerequisite: Upper-division standing.

**Topic 2: Language and Thought.** Study of the relation between language and thought, using a cognitive science approach. Examines the words people use and how people think; whether language structure affects thought; and some cognitive aspects of language. Prerequisite: Upper-division standing.

**Topic 3: Sign Languages and Signing Communities.** Same as American Sign Language 326. Examines the grammar of signed languages, their use in signing communities, and the acquisition of signed languages as first languages. No knowledge of American Sign Language is required. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: Upper-division standing.

**Topic 4: Language and People.** Areas in language and linguistics that most directly impact people, such as language and ethnicity, language and nation-building, and language politics. Prerequisite: Upper-division standing.

**Topic 5: Bilingual Language Acquisition.** Examines various aspects of bilingual first language acquisition including phonology, morphology, and syntax, as well as the child's use of his/her languages. Prerequisite: Upper-division standing.

**Topic 6: Indigenous Languages of the Americas.** Same as Latin American Studies 322 (Topic 15: Indigenous Languages of the Americas). Examines various aspects of languages in the Americas, including their linguistic structures, the cultural domains in which they exist, and their histories of language contact and change. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 9: Psycholinguistics.** Examines the psychological mechanisms that people use in learning, comprehending, and producing language. Prerequisite: Upper-division standing.

### **LIN 353C. Introduction to Computational Linguistics.**

Introduction to key representations and algorithms used in computational linguistics and the main natural language processing applications. Three lecture hours a week for one semester. Linguistics 350 (Topic: Introduction to Computational Linguistics) and 353C may not both be counted.

### **LIN 353N. Natural Language Processing.**

Introduces theoretical and applied topics relating to natural language processing, including machine translation, search, automatic summarization, and dialog systems. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 378 (Topic: Natural Language Processing), Linguistics 350 (Topic: Natural Language Processing), 353N.

### **LIN 357. Undergraduate Research.**

Supervised research experience. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and Linguistics 306 with a grade of at least C-.

### **LIN 358Q. Supervised Research.**

Supervised student-initiated research. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and Linguistics 306 with a grade of at least C-.

### **LIN 358S. Fundamentals of Speech Science.**

Same as Communication Sciences and Disorders 358S. Neurophysiological mechanisms underlying the encoding and decoding of speech. Three lecture hours a week for one semester. Only one of the following may be counted: Communication Sciences and Disorders 315S, 358S, 396N, Linguistics 315, 358S. Prerequisite: Upper-division standing and a University grade point average of at least 2.25; for Communication Sciences and Disorders majors, Communication Sciences and Disorders 313L and 358 with a grade of at least C in each.

### **LIN 360K. Introduction to English Grammar.**

Introduction to the study of the syntactic structure of modern English from the viewpoint of generative grammar. Three lecture hours a week for one semester. English 360K and Linguistics 360K may not both be counted. Prerequisite: Upper-division standing.

### **LIN 364M. History of the English Language.**

Same as English 364M. Development of sounds, forms, and vocabulary of the English language from its origins to the present. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **LIN 372K. Sound Patterns: From Sound to Word.**

Methods and principles of analyzing the sound systems of languages. Three lecture hours a week for one semester. Prerequisite: Linguistics 344K.

### **LIN 372L. Syntax and Semantics: The Structure and Meaning of Utterances.**

Methods and principles of describing the syntactic systems of languages. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Linguistics 306.

### **LIN 373. Topics in Linguistics and Related Disciplines.**

Introduction to the study of the areas of linguistics that involve other disciplines, such as sociolinguistics, psycholinguistics, mathematical methods in linguistics. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Child Language.** Examination of theory and research concerning the development of language in the child. Linguistics 373 (Topic 1) and Psychology 333P may not both be counted. Prerequisite: Upper-division standing.

**Topic 2: Language and Speech in American Society.** Same as American Studies 321 (Topic 2: Language and Speech in American Society), Anthropology 325N, and Sociology 352M (Topic 3: Language and Speech in American Society). Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.

**Topic 3: Language in Culture and Society.** Same as Anthropology 325M and Sociology 352M (Topic 4: Language in Culture and Society). Language as a cultural resource; functions of language in society; survey of language communities. Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.

**Topic 5: Sociolinguistics of German-Speaking Society.** Same as Germanic Civilization 327E (Topic 3: Sociolinguistics of German-Speaking Society). Prerequisite: Upper-division standing or consent of instructor.

**Topic 7: Introduction to Cognitive Science.** Same as Cognitive Science 360 (Topic 1: Introduction to Cognitive Science) and Philosophy 365 (Topic 2: Introduction to Cognitive Science). Prerequisite: Upper-division standing.

**Topic 8: German and English: Historical Perspectives.** Same as Anthropology 320L (Topic 8: German and English: Historical Perspectives), Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), and Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8), 320L (Topic 9: The German Language: Historical Perspectives), Classical Civilization 348 (Topic 8), 348 (Topic 9: The German Language: Historical Perspectives), German 369 (Topic 4: The German Language: Historical Perspectives), Germanic Civilization 327E (Topic 9), Linguistics 373 (Topic 8), 373 (Topic 9: The German Language: Historical Perspectives). Prerequisite: For English majors, completion of at least thirty semester hours of coursework, including English 316K or the equivalent; for others, upper-division standing.

**Topic 9: The German Language: Historical Perspectives.** Same as Anthropology 320L (Topic 9: The German Language: Historical Perspectives), Classical Civilization 348 (Topic 9: The German Language: Historical Perspectives), and German 369 (Topic 4: The German Language: Historical Perspectives). Only one of the following may be counted: Anthropology 320L (Topic 8: German and English: Historical Perspectives), 320L (Topic 9), Classical Civilization 348 (Topic 8: German and English: Historical Perspectives), 348 (Topic 9), German 369 (Topic 4), Germanic Civilization 327E (Topic 9: German and English: Historical Perspectives), Linguistics 373 (Topic 8: German and English: Historical Perspectives), 373 (Topic 9). Prerequisite: Six semester hours of upper-division coursework in German, or fourteen hours of coursework in German and six hours of coursework in linguistics.

### **LIN 374M. Sociolinguistics.**

Same as Anthropology 374M. An in-depth treatment of current interests in sociolinguistic research literature. Subjects include language and gender; social, regional, and ethnic dialects of American English; language use in African American communities; language and identity in a pluralistic society; and language, literacy, and education. Three lecture hours a week for one semester. Prerequisite: Anthropology 302 or Linguistics 306.

### **LIN 379. Conference Course in Linguistics.**

Supervised individual study of selected problems in linguistics. Conference course. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in linguistics.

### **LIN 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Conference course for two semesters. May be repeated for credit. Prerequisite: For 679HA, admission to the Linguistics Honors Program; for 679HB, Linguistics 679HA.

## **Department of Middle Eastern Studies**

Before enrolling for the first time in any language offered by the Department of Middle Eastern Studies, all students with knowledge of the language, however acquired, must be tested to determine the course for which they should register. Information about the tests is available from the departmental undergraduate adviser. The Department of Middle Eastern Studies considers students educated in a Middle Eastern language beyond the elementary school level to be native speakers of that language.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Arabic: ARA**

#### **Lower-Division Courses**

##### **ARA 601C. Intensive Arabic I.**

Not open to native speakers of Arabic. First semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 601C, 506, 508. Arabic 601C and 106C may not both be counted.

##### **ARA 305. Arabic Tutorial.**

The basics of the Arabic language. Individual instruction. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Consent of the faculty coordinator.

##### **ARA 506 (TCCN: ARAB 1511). First-Year Arabic I.**

Not open to native speakers of Arabic. First semester of Arabic language instruction. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 601C, 506, 508. Prerequisite: Credit or registration for Arabic 106C.

##### **ARA 106C. Conversation for First-Year Arabic I.**

Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 601C and 106C may not both be counted. Prerequisite: Credit or registration for Arabic 506.

##### **ARA 507 (TCCN: ARAB 1512). First-Year Arabic II.**

Not open to native speakers of Arabic. Continuation of Arabic 506. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 507, 509, 611C. Prerequisite: Arabic 506 and 106C with a grade of at least C in each, and credit or registration for Arabic 107C.

##### **ARA 107C. Conversation for First-Year Arabic II.**

Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 107C and 611C may not both be counted. Prerequisite: Arabic 506 and 106C with a grade of at least C in each, and credit or registration for Arabic 507.

##### **ARA 508. Modern Standard Arabic I.**

Designed to provide students with basic competence in Modern Standard Arabic, targeting the skills of speaking, reading, writing, and listening. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 601C, 506, 508.

### **ARA 509. Modern Standard Arabic II.**

Continuation of Arabic 508. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 507, 509, 611C. Prerequisite: Arabic 508 with a grade of at least C.

### **ARA 611C. Intensive Arabic II.**

Not open to native speakers of Arabic. Second semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 507, 509, 611C. Arabic 107C and 611C may not both be counted. Prerequisite: Arabic 506 and 106C with a grade of at least C in each, or Arabic 601C with a grade of at least C.

### **ARA 112C. Conversation for Second-Year Arabic I.**

Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 112C and 621K may not both be counted. Prerequisite: Arabic 507 and 107C with a grade of at least C in each, and credit or registration for Arabic 512K.

### **ARA 112D. Conversation for Second-Year Arabic II.**

Not open to native speakers of Arabic. One lecture hour a week for one semester. Arabic 112D and 621L may not both be counted. Prerequisite: Arabic 112C and 512K (or 412K) with a grade of at least C in each, and credit or registration for Arabic 512L.

### **ARA 512K. Second-Year Arabic I.**

Not open to native speakers of Arabic. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 412K, 512K, 413, 621K. Prerequisite: Arabic 507 and 107C with a grade of at least C in each, and credit or registration for Arabic 112C.

### **ARA 512L. Second-Year Arabic II.**

Not open to native speakers of Arabic. Continuation of Arabic 512K. Five lecture hours a week for one semester. Only one of the following may be counted: Arabic 412L, 512L, 414, 621L. Prerequisite: Arabic 112C and 512K (or 412K) with a grade of at least C in each, and credit or registration for Arabic 112D.

### **ARA 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Arabic.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework counted in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **ARA 321. Introduction to Arabic Dialects.**

Introduction to Arabic as spoken throughout the Arab world. Three lecture hours a week for one semester. Prerequisite: Arabic 420K (or 320K) with a grade of at least C.

### **ARA 621K. Intensive Arabic III.**

Not open to native speakers of Arabic. Third semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 412K, 512K, 413, 621K. Arabic 112C and 621K may not both be counted.

Prerequisite: Arabic 507 and 107C with a grade of at least C in each, or Arabic 611C with a grade of at least C.

### **ARA 621L. Intensive Arabic IV.**

Not open to native speakers of Arabic. Fourth semester of intensive Arabic language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Arabic 412L, 512L, 414, 621L. Arabic 112D and 621L may not both be counted. Prerequisite: Arabic 112C and 512K (or 412K) with a grade of at least C in each, or 621K with a grade of at least C.

### **ARA 322K. Levantine Arabic.**

Not open to native speakers of Arabic. Three lecture hours a week for one semester. Prerequisite: Arabic 512L (or 412L) or 621L with a grade of at least C.

### **ARA 325K. Egyptian Arabic.**

Not open to native speakers of Arabic. Introduction to the Egyptian dialect of Arabic. Three lecture hours a week for one semester. Prerequisite: Arabic 512L (or 412L) or 621L with a grade of at least C.

### **ARA 327K. Advanced Spoken Media Arabic I.**

Development of the specialized vocabulary and skills needed in the media or public policy sectors of the Arab-speaking world. Three lecture hours a week for one semester. Prerequisite: Arabic 420L or 531L with a grade of at least B-.

### **ARA 327L. Advanced Spoken Media Arabic II.**

Development of the specialized vocabulary and skills needed in the media or public policy sectors of the Arab-speaking world. Three lecture hours a week for one semester. Prerequisite: Arabic 327K with a grade of at least B-.

### **ARA 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Arabic.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **ARA 130D. Arabic across Disciplines.**

Students read and discuss Arabic language materials related to the subject matter of another designated course. One lecture hour a week for one semester. No more than three semester hours may be counted toward the major in either Middle Eastern Studies or Middle Eastern Languages and Culture. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **ARA 531K. Intensive Arabic V.**

Not open to native speakers of Arabic. Five lecture hours a week for one semester. Arabic 320K, 420K and 531K may not both be counted. Arabic 120C and 531K may not both be counted. Prerequisite: Arabic 112D and 512L (or 412L) with a grade of at least C in each, or Arabic 621L with a grade of at least C.

### **ARA 531L. Intensive Arabic VI.**

Not open to native speakers of Arabic. Sixth semester of intensive Arabic language instruction. Five lecture hours a week for one



semester. Arabic 320L, 420L and 531L may not both be counted. Arabic 120D and 531L may not both be counted. Prerequisite: Arabic 120C and 420K (or 320K) with a grade of at least C in each, or Arabic 531K with a grade of at least C.

### **ARA 360L. Topics in Arabic Language, Literature, and Culture.**

Close textual study of prose or poetry in Arabic. Some topics may focus on the cultural impact of literature and language. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and Arabic 120D and 420L with a grade of at least C in each, or Arabic 531L with a grade of at least C.

**Topic 2: Arab Women Poets.** Same as Islamic Studies 373 (Topic 7: Arab Women Poets) and Middle Eastern Studies 342 (Topic 26: Arab Women Poets). Only one of the following may be counted: Arabic 360L (Topic 2), Comparative Literature 323 (Topic: Arab Women Poets), Islamic Studies 372 (Topic 14: Arab Women Poets), 373 (Topic 7), Middle Eastern Studies 323K (Topic 4: Arab Women Poets), 342 (Topic 26).

**Topic 3: Politics of Court Literature.** Same as Islamic Studies 373 (Topic 6: Politics of Court Literature) and Middle Eastern Studies 342 (Topic 25: Politics of Court Literature). Only one of the following may be counted: Arabic 360L (Topic 3), Comparative Literature 323 (Topic: Politics of Court Literature), Islamic Studies 372 (Topic 19: Politics of Court Literature), 373 (Topic 6), Middle Eastern Studies 321K (Topic 14: Politics of Court Literature), 342 (Topic 25).

**Topic 4: Translating Arabic Texts.** Only one of the following may be counted: Arabic 360L (Topic 4), 380C (Topic 8: Translating Arabic Texts), Middle Eastern Studies 381 (Topic 39: Translating Arabic Texts).

### **ARA 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Conference course for two semesters. Prerequisite: For 679HA, admission to the Arabic Language and Literature Honors Program; for 679HB, Arabic 679HA.

## **Hebrew: HEB**

### **Lower-Division Courses**

#### **HEB 601C. Intensive Hebrew I.**

First semester of intensive Hebrew language instruction. Six lecture hours a week for one semester. Hebrew 601C and 506 may not both be counted. Hebrew 601C and 507 may not both be counted.

#### **HEB 506. First-Year Hebrew I.**

Not open to native speakers of Hebrew. Modern Israeli Hebrew, including the writing system, basic sentence structure, vocabulary, and simple conversation. Five lecture hours a week for one semester. Hebrew 601C and 506 may not both be counted.

#### **HEB 507. First-Year Hebrew II.**

Not open to native speakers of Hebrew. Continuation of Hebrew 506. Five lecture hours a week for one semester. Hebrew 601C and 507 may not both be counted. Prerequisite: Hebrew 506 with a grade of at least C.

#### **HEB 508. First-Year Biblical Hebrew I.**

Introduction to biblical Hebrew, including basic lexicon and grammar. Emphasis on reading the Hebrew Bible; selected texts may include the

Creation, the Tower of Babel, the binding of Isaac, the Joseph story, and the David and Goliath story. Five lecture hours a week for one semester.

#### **HEB 509. First-Year Biblical Hebrew II.**

Builds on material covered in Hebrew 508. A thorough study of biblical Hebrew grammar, with emphasis on the verb system and the rules of sentence structure. Selected texts include biblical chapters of poetic, legal, and prophetic nature, such as the Ten Commandments, chapters from the Book of Leviticus, Psalms 23, 27, and 121, Proverbs 8 and 10, Isaiah 53, and Jeremiah 31. Five lecture hours a week for one semester. Prerequisite: Hebrew 508 with a grade of at least C.

#### **HEB 611C. Intensive Hebrew II.**

Second semester of intensive Hebrew language instruction. Six lecture hours a week for one semester. Hebrew 611C and 312K, 412K may not both be counted. Hebrew 611C and 312L, 412L may not both be counted. Prerequisite: Hebrew 601C or 507 with a grade of at least C.

#### **HEB 412K. Second-Year Hebrew I.**

Not open to native speakers of Hebrew. Modern Israeli Hebrew. Continuation of Hebrew 507 with expanded grammar and conversation. Four lecture hours a week for one semester. Hebrew 611C and 312K, 412K may not both be counted. Prerequisite: Hebrew 507 with a grade of at least C.

#### **HEB 412L. Second-Year Hebrew II.**

Not open to native speakers of Hebrew. Continuation of Hebrew 412K, with emphasis on conversation and composition. Four lecture hours a week for one semester. Hebrew 611C and 312L, 412L may not both be counted. Prerequisite: Hebrew 412K (or 312K) with a grade of at least C.

#### **HEB 313K. Second-Year Biblical Hebrew I.**

Builds on material covered in Hebrew 508 and 509. A thorough study of biblical Hebrew grammar, with emphasis on nominal structures and complex sentence structures. Students are introduced to the historical development of biblical Hebrew phonology and to the commonly used reference works. Selected texts include large sections from Genesis, the Book of Judges, the Book of Job, and the Scroll of Ruth. Three lecture hours a week for one semester. Prerequisite: Hebrew 509 with a grade of at least C.

#### **HEB 313L. Second-Year Biblical Hebrew II.**

Builds on material covered in Hebrew 313K. A study of biblical Hebrew, with an introduction to Mishnaic and Modern Hebrew. Focus on the historical development of the Hebrew language. The texts studied are taken from the Hebrew Bible and the Mishnah, and include poems from the Golden Age in Spain and Modern Hebrew poetry and prose. Three lecture hours a week for one semester. Prerequisite: Hebrew 313K with a grade of at least C.

#### **HEB 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Hebrew.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.



## Upper-Division Courses

### HEB 320K. Hebrew via Popular Culture.

Three lecture hours a week for one semester. Hebrew 320K and 346 (Topic 7: Hebrew via Popular Culture) may not both be counted. Prerequisite: Hebrew 611C or 412I (or 312L) with a grade of at least C.

### HEB 320L. Hebrew through the Media.

Three lecture hours a week for one semester. Hebrew 346 (Topic: Hebrew through the Media) and 320L may not both be counted. Prerequisite: Hebrew 320K (or 346, Topic 7: Hebrew through Popular Culture) with a grade of at least C.

### HEB 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Hebrew.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### HEB 130D. Hebrew across Disciplines.

Students read and discuss Hebrew language materials related to the subject matter of another designated course. One lecture hour a week for one semester. No more than three semester hours may be counted toward the major in either Middle Eastern Studies or Middle Eastern Languages and Culture. May be repeated for credit. Prerequisite: Upper-division standing, Hebrew 611C or 412L (or 312L), and consent of instructor.

### HEB 346. Topics in Hebrew Language, Literature, and Culture.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Hebrew 412L (or 312L).

**Topic 8: Jerusalem in Israeli Literature.** Same as Jewish Studies 363 (Topic 18: Jerusalem in Israeli Literature).

**Topic 9: Mizrahi Writing in Israel.** Same as Jewish Studies 363 (Topic 8: Mizrahi Writing in Israel) and Middle Eastern Studies 342 (Topic 9: Mizrahi Writing in Israel). Only one of the following may be counted: Hebrew 346 (Topic 9), Jewish 363 (Topic 8), Middle Eastern Studies 325 (Topic 6: Mizrahi Writing in Israel), 342 (Topic 9). Additional prerequisite: Hebrew 412L (or 312L) or 320L with a grade of at least C.

### HEB 679H. Honors Tutorial Course.

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Conference course for two semesters. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing and admission to the Hebrew Language and Literature Honors Program; for 679HB, Hebrew 679HA with a grade of A.

## Islamic Studies: ISL

### Lower-Division Courses

#### ISL 310. Introduction to Islam.

Same as History 306N (Topic 7: Introduction to Islam) and Religious Studies 319. The beliefs, theology, history, and main social and legal institutions of Islam, including the concept of God and society, the role of women, and Islamic government and movements. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic 7), Islamic Studies 310, Middle Eastern Studies 310 (Topic 1: Introduction to Islam), Religious Studies 319.

#### ISL 311. Topics in Islamic Studies.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Introduction to the Middle East: Religious, Cultural, and Historical Foundations.** A survey of the history and civilization of the Middle East from the sixth to the fourteenth century.

**Topic 2: Judaism, Christianity, and Islam: An Introduction.**

Same as History 304R, Jewish Studies 311 (Topic 2: Judaism, Christianity, and Islam: An Introduction), and Religious Studies 304. Examines the intertwined historical developments of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims.

### Upper-Division Courses

#### ISL 340. Topics in Islam.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Prophet of Islam: His Life and Times.** Same as History 364G (Topic 2: Prophet of Islam: His Life and Times) and Religious Studies 325. A detailed study of the prophet Muhammad's life and message, and of the means by which his life was recorded and popularized. Only one of the following may be counted: History 364G (Topic 2), Islamic Studies 340 (Topic 1), Middle Eastern Studies 321K (Topic 6: Prophet of Islam: His Life and Times), Religious Studies 325. Prerequisite: Upper-division standing.

**Topic 2: The Qur'an.** Same as Middle Eastern Languages and Cultures 321 (Topic 9: The Qur'an), Middle Eastern Studies 342 (Topic 16: The Qur'an), and Religious Studies 325G. The history, language and style, and themes of the Qur'an. Only one of the following may be counted: Arabic 372 (Topic 2: The Qur'an), Islamic Studies 340 (Topic 2), Middle Eastern Languages and Cultures 321 (Topic 9), Middle Eastern Studies 320 (Topic 14: The Qur'an), 342 (Topic 16), Religious Studies 325G. Prerequisite: Upper-division standing.

**Topic 3: Classical Islamic Studies.** Same as Middle Eastern Languages and Cultures 321 (Topic 15: Classical Islamic Studies) and Middle Eastern Studies 342 (Topic 15: Classical Islamic Studies). Only one of the following may be counted: Arabic 372 (Topic 1: Classical Islamic Studies), Islamic Studies 340 (Topic 3), Middle Eastern Languages and Cultures 321 (Topic 15), Middle Eastern Studies 321K (Topic 11: Classical Islamic Studies), 342 (Topic 15). Prerequisite: Upper-division standing.

**Topic 4: Sufism and Islamic Mysticism.** Same as Middle Eastern Studies 342 (Topic 24: Sufism and Islamic Mysticism) and Religious Studies 358 (Topic 4: Sufism and Islamic Mysticism). Muslim debates of Sufism; the historical development of Sufi beliefs regarding theology, religious laws, expression, and popular social

practices. Only one of the following may be counted: Asian Studies 340 (Topic: Sufism and Islamic Mysticism), History 364G (Topic: Sufism and Islamic Mysticism), Islamic Studies 340 (Topic 4), 372 (Topic 10: Sufism: Islamic Mysticism and Spirituality), Middle Eastern Studies 320 (Topic 16: Sufism: Islamic Mysticism and Spirituality), 321K (Topic: Sufism and Islamic Mysticism), 342 (Topic 24), Religious Studies 341 (Topic: Sufism and Islamic Mysticism), 358 (Topic 4). Prerequisite: Upper-division standing.

### ISL 369. Conference Course in Islamic Studies.

Supervised individual study of selected problems in Islamic studies. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### ISL 372. Topics in Islamic Cultures.

Three lecture hours a week for one semester; additional hours may be required for some topics. Islamic Studies 372 and 373 may not both be counted unless the topics vary. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: Veiling in the Muslim World.** Same as Asian Studies 372 (Topic 14: Veiling in the Muslim World), Religious Studies 358 (Topic 5: Veiling in the Muslim World), and Women's and Gender Studies 340 (Topic 11: Veiling in the Muslim World). Only one of the following may be counted: Asian Studies 372 (Topic 14), Islamic Studies 372 (Topic 2), Middle Eastern Studies 322K (Topic 17: Veiling in the Muslim World), Religious Studies 358 (Topic 5), Women's and Gender Studies 340 (Topic 11). Prerequisite: Upper-division standing.

**Topic 11: Sacred and Ceremonial Textiles.** Same as Anthropology 324L (Topic 29: Sacred and Ceremonial Textiles). Textiles and material objects indigenous to the Islamic world, and what they reveal about the culture of various Islamic societies. Only one of the following may be counted: Anthropology 324L (Topic 29), Islamic Studies 372 (Topic 11), Middle Eastern Studies 322K (Topic 24: Sacred and Ceremonial Textiles). Prerequisite: Upper-division standing.

**Topic 12: Muslim Women: Past and Present I.** Survey of the role of women in Islamic societies from the Middle Ages to the eighteenth century, with a glimpse into modern times. Islamic Studies 372 (Topic 12) and Middle Eastern Studies 321K (Topic 9: Muslim Women: Past and Present I) may not both be counted. Prerequisite: Upper-division standing.

**Topic 13: Muslim Women: Past and Present II.** Survey of the role of women in the modern Muslim world, with a glimpse into historical developments within Islamic societies. Islamic Studies 372 (Topic 13) and Middle Eastern Studies 321K (Topic 10: Muslim Women: Past and Present II) may not both be counted. Prerequisite: Upper-division standing.

### ISL 373. Topics in Middle Eastern Islamic Cultures.

Three lecture hours a week for one semester; additional hours may be required for some topics. Islamic Studies 372 and 373 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Introduction to Arabic Literature.** Same as Middle Eastern Languages and Cultures 321 (Topic 1: Introduction to Arabic Literature) and Middle Eastern Studies 342 (Topic 1: Introduction to Arabic Literature). General survey of major themes, genres, and artists in the Arabic literary tradition from the sixth century to the modern era. Only one of the following may be counted: Arabic 322, Islamic Studies 372 (Topic 15: Introduction

to Arabic Literature), 373 (Topic 1), Middle Eastern Languages and Cultures 321 (Topic 1), Middle Eastern Studies 3232K (Topic 5: Introduction to Arabic Literature), 328 (Topic: Introduction to Arabic Literature), 342 (Topic 1), Religious Studies 358 (Topic 1: Introduction to Arabic Literature). Prerequisite: Upper-division standing.

**Topic 2: Loyalty and Rebellion in Arabic Literature.** Same as Middle Eastern Languages and Cultures 321 (Topic 2: Loyalty and Rebellion in Arabic Literature) and Middle Eastern Studies 342 (Topic 2: Loyalty and Rebellion in Arabic Literature). Only one of the following may be counted: Arabic 360K (Topic 4: Loyalty and Rebellion in Arabic Literature), Islamic Studies 372 (Topic 16: Loyalty and Rebellion in Arabic Literature), 373 (Topic 2), Middle Eastern Languages and Cultures 321 (Topic 2), Middle Eastern Studies 321K (Topic 12: Loyalty and Rebellion in Arabic Literature), 342 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Memory and Identity in Ancient Arabia.** Same as Middle Eastern Languages and Cultures 321 (Topic 3: Memory and Identity in Ancient Arabia) and Middle Eastern Studies 342 (Topic 3: Memory and Identity in Ancient Arabia). Only one of the following may be counted: Arabic 360K (Topic 5: Memory and Identity in Ancient Arabia), Islamic Studies 372 (Topic 17: Memory and Identity in Ancient Arabia), Islamic Studies 373 (Topic 3), Middle Eastern Languages and Cultures 321 (Topic 3), Middle Eastern Studies 321K (Topic 13: Memory and Identity in Ancient Arabia), 342 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: The Arabian Nights.** Same as Middle Eastern Languages and Cultures 321 (Topic 4: The Arabian Nights) and Middle Eastern Studies 342 (Topic 4: The Arabian Nights). Only one of the following may be counted: Arabic 360K (Topic 6: The Arabian Nights), Comparative Literature 323 (Topic: The Arabian Nights), Islamic Studies 372 (Topic 18: The Arabian Nights), Islamic Studies 373 (Topic 4), Middle Eastern Languages and Cultures 321 (Topic 4), Middle Eastern Studies 323K (Topic 6: The Arabian Nights), 328 (Topic: The Arabian Nights), 342 (Topic 4), Religious Studies 358 (Topic: The Arabian Nights), Women's and Gender Studies 340 (Topic: The Arabian Nights). Prerequisite: Upper-division standing.

**Topic 5: Modern Egypt: A History.** Same as History 334E and Middle Eastern Studies 343 (Topic 1: Modern Egypt: A History). Critically examines the social, political, and intellectual dynamics that shaped the different forms of political community, economic organization, and public culture over the past century. Covers colonialism, liberalism, Arab socialism, authoritarian capitalism, and Islamic republicanism. Only one of the following may be counted: Arabic 372 (Topic: Modern Egypt: A History), History 334E, History 364G (Topic: Modern Egypt: A History), Islamic Studies 372 (Topic: Modern Egypt: A History), 373 (Topic 5), Middle Eastern Studies 322K (Topic: Modern Egypt: A History), 343 (Topic 1). Prerequisite: Upper-division standing.

**Topic 6: Politics of Court Literature.** Same as Arabic 360L (Topic 3: Politics of Court Literature) and Middle Eastern Studies 342 (Topic 25: Politics of Court Literature). Only one of the following may be counted: Arabic 360L (Topic 3), Comparative Literature 323 (Topic: Politics of Court Literature), Islamic Studies 372 (Topic 19: Politics of Court Literature), 373 (Topic 6), Middle Eastern Studies 321K (Topic 14: Politics of Court Literature), 342 (Topic 25). Prerequisite: Upper-division standing; Arabic 120D and 420L with a grade of at least C in each, or Arabic 531L with a grade of at least C.

**Topic 7: Arab Women Poets.** Same as Arabic 360L (Topic 2: Arab Women Poets) and Middle Eastern Studies 342 (Topic 26: Arab Women Poets). Only one of the following may be counted: Arabic 360L (Topic 2), Comparative Literature 323 (Topic: Arab Women Poets), Islamic Studies 372 (Topic 14: Arab Women Poets), 373

(Topic 7), Middle Eastern Studies 323K (Topic 4: Arab Women Poets), 342 (Topic 26). Prerequisite: Upper-division standing, and Arabic 120D and 420L with a grade of at least C in each, or Arabic 531L with a grade of at least C.

### **ISL 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, following by research and writing to produce a substantial paper on a specific topic in Islamic studies to be completed during the second semester. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Islamic Studies Honors Program; for 679HB, Islamic Studies 679HA.

## **Middle Eastern Languages and Cultures: MEL**

### **Lower-Division Courses**

#### **MEL 301. Gateway to the Middle East.**

Three lecture hours a week for one semester.

### **Upper-Division Courses**

#### **MEL 321. Topics in Middle Eastern Languages and Cultures.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Arabic 322, 360K, 372; Hebrew 372, 374; Islamic Studies 372; Persian 361, 372; Turkish 361, 372; Middle Eastern Languages and Cultures 321; Middle Eastern Studies 342. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Introduction to Arabic Literature.** Same as Islamic Studies 373 (Topic 1: Introduction to Arabic Literature) and Middle Eastern Studies 342 (Topic 1: Introduction to Arabic Literature). General survey of major themes, genres, and artists in the Arabic literary tradition from the sixth century to the modern era. Only one of the following may be counted: Arabic 322, Islamic Studies 372 (Topic 15: Introduction to Arabic Literature), 373 (Topic 1), Middle Eastern Languages and Cultures 321 (Topic 1), Middle Eastern Studies 3232K (Topic 5: Introduction to Arabic Literature), 328 (Topic: Introduction to Arabic Literature), 342 (Topic 1), Religious Studies 358 (Topic 1: Introduction to Arabic Literature). Prerequisite: Upper-division standing.

**Topic 2: Loyalty and Rebellion in Arabic Literature.** Same as Islamic Studies 373 (Topic 2: Loyalty and Rebellion in Arabic Literature) and Middle Eastern Studies 342 (Topic 2: Loyalty and Rebellion in Arabic Literature). Only one of the following may be counted: Arabic 360K (Topic 4: Loyalty and Rebellion in Arabic Literature), Islamic Studies 372 (Topic 16: Loyalty and Rebellion in Arabic Literature), 373 (Topic 2), Middle Eastern Languages and Cultures 321 (Topic 2), Middle Eastern Studies 321K (Topic 12: Loyalty and Rebellion in Arabic Literature), 342 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Memory and Identity in Ancient Arabia.** Same as Islamic Studies 373 (Topic 3: Memory and Identity in Ancient Arabia) and Middle Eastern Studies 342 (Topic 3: Memory and Identity in Ancient Arabia). Only one of the following may be counted: Arabic 360K (Topic 5: Memory and Identity in Ancient Arabia), Islamic Studies 372 (Topic 17: Memory and Identity in Ancient Arabia), Islamic Studies 373 (Topic 3), Middle Eastern Languages and Cultures 321 (Topic 3), Middle Eastern Studies 321K (Topic 13: Memory and Identity in Ancient Arabia), 342 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: The Arabian Nights.** Same as Islamic Studies 373 (Topic 4: The Arabian Nights) and Middle Eastern Studies 342 (Topic 4: The Arabian Nights). Only one of the following may be counted: Comparative Literature 323 (Topic: The Arabian Nights), Middle Eastern Languages and Cultures 321 (Topic 4), Middle Eastern Studies 323K (Topic 6: The Arabian Nights), Religious Studies 358 (Topic: The Arabian Nights), Women's and Gender Studies 340 (Topic: The Arabian Nights). Prerequisite: Upper-division standing.

**Topic 5: Introduction to Israeli Literature.** Same as Jewish Studies 363 (Topic 17: Introduction to Israeli Literature) and Middle Eastern Studies 342 (Topic 5: Introduction to Israeli Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: Introduction to Israeli Literature), English 322 (Topic: Introduction to Israeli Literature), Middle Eastern Studies 325 (Topic 7: Introduction to Israeli Literature). Prerequisite: Upper-division standing.

**Topic 6: Love and the State in Contemporary Israeli Literature.** Same as Jewish Studies 363 (Topic 7: Love and the State in Contemporary Israeli Literature) and Middle Eastern Studies 342 (Topic 6: Love and the State in Contemporary Israeli Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: Love and State in Contemporary Israeli Literature), English 322 (Topic: Love and State in Contemporary Israeli Literature), Hebrew 374 (Topic 9: Love and the State in Contemporary Israeli Literature), Jewish Studies 363 (Topic 7), Middle Eastern Languages and Cultures 321 (Topic 6), Middle Eastern Studies 322K (Topic 27: Love and the State in Contemporary Israeli Literature), 342 (Topic 6), Women's and Gender Studies 340 (Topic: Love and State in Contemporary Israeli Literature). Prerequisite: Upper-division standing.

**Topic 7: Postmodernist Israeli Literature.** Same as Jewish Studies 363 (Topic 19: Postmodernist Israeli Literature) and Middle Eastern Studies 342 (Topic 7: Postmodernist Israeli Literature). Study of the first decades of Israeli literature. Themes include the establishment of a new state in the aftermath of the Holocaust, conflict between Israel and Arab nations, and conflict between Israelis and Palestinians. Only one of the following may be counted: Comparative Literature 323 (Topic: Postmodernist Israeli Literature), English 322 (Topic: Postmodernist Israeli Literature), Hebrew 374 (Topic 8: Postmodernist Israeli Literature), Jewish Studies 363 (Topic 19), Middle Eastern Languages and Cultures 321 (Topic 7), Middle Eastern Studies 325 (Topic: Postmodernist Israeli Literature), 342 (Topic 7). Prerequisite: Upper-division standing.

**Topic 8: The Sacred and the Secular in Contemporary Jewish Literature.** Same as Jewish Studies 363 (Topic 10: The Sacred and the Secular in Contemporary Jewish Literature) and Middle Eastern Studies 342 (Topic 8: The Sacred and the Secular in Contemporary Jewish Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: The Sacred and the Secular in Contemporary Jewish Literature), English 322 (Topic: The Sacred and the Secular in Contemporary Jewish Literature), Hebrew 374 (Topic 11: The Sacred and the Secular in Contemporary Jewish Literature), Jewish Studies 363 (Topic 10), Middle Eastern Languages and Cultures 321 (Topic 8), Middle Eastern Studies 322K (Topic 28: The Sacred and the Secular in Contemporary Jewish Literature), 342 (Topic 8), Religious Studies 353 (Topic: The Sacred and the Secular in Contemporary Jewish Literature). Prerequisite: Upper-division standing.

**Topic 9: The Qur'an.** Same as Islamic Studies 340 (Topic 2: The Qur'an), Middle Eastern Studies 342 (Topic 16: The Qur'an), and Religious Studies 325G. The history, language and style, and themes of the Qur'an. Only one of the following may be counted: Arabic 372 (Topic 2: The Qur'an), Islamic Studies 340 (Topic 2), Middle Eastern Languages and Cultures 321 (Topic 9), Middle



Eastern Studies 320 (Topic 14: The Qur'an), 342 (Topic 16), Religious Studies 325G. Prerequisite: Upper-division standing.

**Topic 10: Persian Literature, Past and Present.** Same as Middle Eastern Studies 342 (Topic 10: Persian Literature, Past and Present). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 10), Middle Eastern Studies 322K (Topic 9: Persian Literature, Past and Present), 342 (Topic 10), Persian 361 (Topic 2: Persian Literature, Past and Present). Prerequisite: Upper-division standing.

**Topic 11: Iranian Women Writers.** Same as Middle Eastern Studies 342 (Topic 11: Iranian Women Writers) and Women's and Gender Studies 340 (Topic 10: Iranian Women Writers). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 11), Middle Eastern Studies 324K (Topic 1: Iranian Women Writers), 342 (Topic 11), Persian 361 (Topic 3: Iranian Women Writers), WGS 340 (Topic 10). Prerequisite: Upper-division standing or consent of instructor.

**Topic 12: Images of the West and Westerners in Persian Fiction.** Same as Middle Eastern Studies 342 (Topic 12: Images of the West and Westerners in Persian Fiction). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 12), Middle Eastern Studies 324K (Topic 3: Images of the West and Westerners in Persian Fiction), 342 (Topic 12), Persian 361 (Topic 1: Images of the West and Westerners in Persian Fiction). Prerequisite: Upper-division standing.

**Topic 13: Iranian Literature in Exile.** Same as Middle Eastern Studies 342 (Topic 13: Iranian Literature in Exile). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 13), Middle Eastern Studies 324K (Topic 2: Iranian Literature in Exile), 342 (Topic 13), Persian 361 (Topic 4: Iranian Literature in Exile). Prerequisite: Upper-division standing.

**Topic 14: Iranian Film and Fiction.** Same as Middle Eastern Studies 342 (Topic 14: Iranian Film and Fiction). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 14), Middle Eastern Studies 324K (Topic 4: Iranian Film and Fiction), 342 (Topic 14), Persian 361 (Topic 5: Iranian Film and Fiction). Prerequisite: Upper-division standing.

**Topic 15: Classical Islamic Studies.** Same as Islamic Studies 340 (Topic 3: Classical Islamic Studies) and Middle Eastern Studies 342 (Topic 15: Classical Islamic Studies). Only one of the following may be counted: Arabic 372 (Topic 1: Classical Islamic Studies), Islamic Studies 340 (Topic 3), Middle Eastern Languages and Cultures 321 (Topic 15), Middle Eastern Studies 321K (Topic 11: Classical Islamic Studies), 342 (Topic 15). Prerequisite: Upper-division standing.

### **MEL 323. Engaging the Middle East.**

Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Middle Eastern Languages and Cultures 301.

### **MEL 379. Conference Course.**

Supervised individual study of selected problems in Middle Eastern languages and cultures. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **MEL 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a literary or linguistic problem. Conference course for two semesters. Prerequisite: For 679HA, admission to the Middle Eastern Languages and Cultures Honors Program; for 679HB, Middle Eastern Languages and Cultures 679HA.

## **Middle Eastern Studies: MES**

### **Lower-Division Courses**

#### **MES 301K. Introduction to the Middle East: Religious, Cultural, and Historical Foundations.**

Same as History 306K. A survey of the history and civilization of the Middle East from the sixth to the fourteenth century. Three lecture hours a week for one semester.

#### **MES 301L. Introduction to the Middle East: Adjustment and Change in Modern Times.**

Same as Government 314 (Topic 3: Introduction to the Middle East: Adjustment and Change in Modern Times) and History 306N (Topic 5: Introduction to the Middle East: Adjustment and Change in Modern Times). The responses of the societies of the Middle East and North Africa (Turkey, Iran, Afghanistan, Israel, and the Arab world) to Western cultural and political challenges, primarily since about 1800. Three lecture hours a week for one semester.

#### **MES 106, 206, 306. Introduction to Middle Eastern Languages and Cultures.**

One, two, or three lecture hours a week for one semester.

#### **MES 310. Topics in Middle Eastern Studies.**

Studies of areas and issues in the Middle East and North Africa. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### **MES 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Middle Eastern Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded to work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **MES 127. Middle Eastern Cultural Exchange.**

Provides an opportunity for students to interact with peer groups in Middle Eastern countries in which Arabic, Hebrew, Persian, and Turkish are spoken. Students engage in a variety of cultural activities and correspond with peer groups via blogs and Internet discussion forums. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Upper-division standing.

#### **MES 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Middle Eastern Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.



### **MES 331C. History of the Ottoman Empire.**

Same as History 331C. A survey of Ottoman society and culture and of the empire's place on the world scene. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **MES 334C. Music Cultures of the Middle East, Past and Present.**

Same as History 334C. A historical and ethnomusicological survey of the Arab, Turkish, and Persian music cultures. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **MES 341. Topics in the Middle East: Social Science.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 324K, 325, 326, 328, 341. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Geography of the Middle East.** Same as Geography 328. Major elements of physical and social environment in the region extending from Egypt to Afghanistan. Only one of the following may be counted: Geography 328, Middle Eastern Studies 322K (Topic 3: Geography of the Middle East), 341 (Topic 1). Prerequisite: Upper-division standing.

**Topic 2: Business in Emerging Markets.** Same as International Business 372 (Topic 2: Business in Emerging Markets) and Latin American Studies 322 (Topic 9: Business in Emerging Markets). Only one of the following may be counted: International Business 372 (Topic 2), Latin American Studies 322 (Topic 9), Middle Eastern Studies 322K (Topic 4: Business in Emerging Markets), 341 (Topic 2). Prerequisite: Upper-division standing.

**Topic 4: Development Communication.** Same as Radio-Television-Film 342 (Topic 6: Development Communication). Only one of the following may be counted: Middle Eastern Studies 322K (Topic 14: Development Communication), 341 (Topic 4), Radio-Television-Film 342 (Topic 6). Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305 and nine additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**Topic 5: Arab-Israeli Politics.** Same as Government 320L. In-depth study of domestic, regional, and international factors involved in politics in the Middle East, including simulation of diplomatic interaction in the Arab-Israeli conflict. Only one of the following may be counted: Government 320L, Middle Eastern Studies 322K (Topic 30: Arab-Israeli Politics), 323K (Topic 1: Arab-Israeli Politics), 341 (Topic 5). Prerequisite: Upper-division standing.

### **MES 342. Topics in the Middle East: Arts and Humanities.**

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320, 321K, 322K, 323K, 324K, 325, 326, 328, 342. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Introduction to Arabic Literature.** Same as Islamic Studies 373 (Topic 1: Introduction to Arabic Literature) and Middle Eastern Languages and Cultures 321 (Topic 1: Introduction to Arabic Literature). General survey of major themes, genres, and artists in the Arabic literary tradition from the sixth century to the modern era. Only one of the following may be counted: Arabic 322, Islamic Studies 372 (Topic 15: Introduction to Arabic Literature), 373 (Topic 1), Middle Eastern Languages and Cultures 321 (Topic 1), Middle Eastern Studies 3232K (Topic 5: Introduction to Arabic Literature), 328 (Topic: Introduction to Arabic Literature), 342 (Topic

1), Religious Studies 358 (Topic 1: Introduction to Arabic Literature). Prerequisite: Upper-division standing.

**Topic 2: Loyalty and Rebellion in Arabic Literature.** Same as Islamic Studies 373 (Topic 2: Loyalty and Rebellion in Arabic Literature) and Middle Eastern Languages and Cultures 321 (Topic 2: Loyalty and Rebellion in Arabic Literature). Only one of the following may be counted: Arabic 360K (Topic 4: Loyalty and Rebellion in Arabic Literature), Islamic Studies 372 (Topic 16: Loyalty and Rebellion in Arabic Literature), Middle Eastern Studies 342 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Memory and Identity in Ancient Arabia.** Same as Islamic Studies 373 (Topic 3: Memory and Identity in Ancient Arabia) and Middle Eastern Languages and Cultures 321 (Topic 3: Memory and Identity in Ancient Arabia). Only one of the following may be counted: Arabic 360K (Topic 5: Memory and Identity in Ancient Arabia), Islamic Studies 372 (Topic 17: Memory and Identity in Ancient Arabia), Islamic Studies 373 (Topic 3), Middle Eastern Languages and Cultures 321 (Topic 3), Middle Eastern Studies 321K (Topic 13: Memory and Identity in Ancient Arabia), 342 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: The Arabian Nights.** Same as Islamic Studies 373 (Topic 4: The Arabian Nights) and Middle Eastern Languages and Cultures 321 (Topic 4: The Arabian Nights). Only one of the following may be counted: Arabic 360K (Topic 6: The Arabian Nights), Comparative Literature 323 (Topic: The Arabian Nights), Islamic Studies 372 (Topic 18: The Arabian Nights), Middle Eastern Studies 342 (Topic 4), Religious Studies 358 (Topic: The Arabian Nights), Women's and Gender Studies 340 (Topic: The Arabian Nights). Prerequisite: Upper-division standing.

**Topic 5: Introduction to Israeli Literature.** Same as Jewish Studies 363 (Topic 17: Introduction to Israeli Literature) and Middle Eastern Languages and Cultures 321 (Topic 5: Introduction to Israeli Literature). Only one of the following may be counted: English 322 (Topic: Introduction to Israeli Literature), Comparative Literature 323 (Topic: Introduction to Israeli Literature), Hebrew 374 (Topic 10: Introduction to Israeli Literature), Middle Eastern Studies 342 (Topic 5). Prerequisite: Upper-division standing.

**Topic 6: Love and the State in Contemporary Israeli Literature.** Same as Jewish Studies 363 (Topic 7: Love and the State in Contemporary Israeli Literature) and Middle Eastern Languages and Cultures 321 (Topic 6: Love and the State in Contemporary Israeli Literature). Only one of the following may be counted: Comparative Literature Only one of the following may be counted: Comparative Literature Only one of the following may be counted: Comparative Literature Only one of the following may be counted: Comparative Literature 323 (Topic: Love and State in Contemporary Israeli Literature), English 322 (Topic: Love and State in Contemporary Israeli Literature), Hebrew 374 (Topic 9: Love and the State in Contemporary Israeli Literature), Jewish Studies 363 (Topic 7), Middle Eastern Languages and Cultures 321 (Topic 6), Middle Eastern Studies 322K (Topic 27: Love and the State in Contemporary Israeli Literature), 342 (Topic 6), Women's and Gender Studies 340 (Topic: Love and State in Contemporary Israeli Literature). Prerequisite: Upper-division standing.

**Topic 7: Postmodernist Israeli Literature.** Same as Jewish Studies 363 (Topic 19: Postmodernist Israeli Literature) and Middle Eastern Languages and Cultures 321 (Topic 7: Postmodernist Israeli Literature). Study of the first decades of Israeli literature. Themes include the establishment of a new state in the aftermath of the Holocaust, conflict between Israel and Arab nations, and conflict between Israelis and Palestinians. Only one of the following may be counted: Comparative Literature 323 (Topic: Postmodernist Israeli Literature), English 322 (Topic: Postmodernist Israeli Literature), Hebrew 374 (Topic 8: Postmodernist Israeli Literature), Jewish

Studies 363 (Topic 19), Middle Eastern Languages and Cultures 321 (Topic 7), Middle Eastern Studies 325 (Topic: Postmodernist Israeli Literature), 342 (Topic 7). Prerequisite: Upper-division standing.

**Topic 8: The Sacred and the Secular in Contemporary Jewish Literature.** Same as Jewish Studies 363 (Topic 10: The Sacred and the Secular in Contemporary Jewish Literature) and Middle Eastern Languages and Cultures 321 (Topic 8: The Sacred and the Secular in Contemporary Jewish Literature). Only one of the following may be counted: Comparative Literature 323 (Topic: The Sacred and the Secular in Contemporary Jewish Literature), English 322 (Topic: The Sacred and the Secular in Contemporary Jewish Literature), Hebrew 374 (Topic 11: The Sacred and the Secular in Contemporary Jewish Literature), Jewish Studies 363 (Topic 10), Middle Eastern Languages and Cultures 321 (Topic 8), Middle Eastern Studies 322K (Topic 28: The Sacred and the Secular in Contemporary Jewish Literature), 342 (Topic 8), Religious Studies 353 (Topic: The Sacred and the Secular in Contemporary Jewish Literature). Prerequisite: Upper-division standing.

**Topic 9: Mizrahi Writing in Israel.** Same as Hebrew 346 (Topic 9: Mizrahi Writing in Israel) and Jewish Studies 363 (Topic 8: Mizrahi Writing in Israel). Only one of the following may be counted: Hebrew 346 (Topic 9), Jewish 363 (Topic 8), Middle Eastern Studies 325 (Topic 6: Mizrahi Writing in Israel), 342 (Topic 9). Prerequisite: Upper-division standing, and Hebrew 412L (or 312L) or 320L with a grade of at least C.

**Topic 10: Persian Literature, Past and Present.** Same as Middle Eastern Languages and Cultures 321 (Topic 10: Persian Literature, Past and Present). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 10), Middle Eastern Studies 322K (Topic 9: Persian Literature, Past and Present), 342 (Topic 10), Persian 361 (Topic 2: Persian Literature, Past and Present). Prerequisite: Upper-division standing.

**Topic 11: Iranian Women Writers.** Same as Middle Eastern Languages and Cultures 321 (Topic 11: Iranian Women Writers) and Women's and Gender Studies 340 (Topic 10: Iranian Women Writers). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 11), Middle Eastern Studies 324K (Topic 1: Iranian Women Writers), 342 (Topic 11), Persian 361 (Topic 3: Iranian Women Writers), WGS 340 (Topic 10). Prerequisite: Upper-division standing.

**Topic 12: Images of the West and Westerners in Persian Fiction.** Same as Middle Eastern Languages and Cultures 321 (Topic 12: Images of the West and Westerners in Persian Fiction). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 12), Middle Eastern Studies 324K (Topic 3: Images of the West and Westerners in Persian Fiction), 342 (Topic 12), Persian 361 (Topic 1: Images of the West and Westerners in Persian Fiction). Prerequisite: Upper-division standing.

**Topic 13: Iranian Literature in Exile.** Same as Middle Eastern Languages and Cultures 321 (Topic 13: Iranian Literature in Exile). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 13), Middle Eastern Studies 324K (Topic 2: Iranian Literature in Exile), 342 (Topic 13), Persian 361 (Topic 4: Iranian Literature in Exile). Prerequisite: Upper-division standing.

**Topic 14: Iranian Film and Fiction.** Middle Eastern Languages and Cultures 321 (Topic 14: Iranian Film and Fiction). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 14), Middle Eastern Studies 324K (Topic 4: Iranian Film and Fiction), 342 (Topic 14), Persian 361 (Topic 5: Iranian Film and Fiction). Prerequisite: Upper-division standing.

**Topic 15: Classical Islamic Studies.** Same as Islamic Studies 340 (Topic 3: Classical Islamic Studies) and Middle Eastern Languages and Cultures 321 (Topic 15: Classical Islamic Studies). Only one of the following may be counted: Arabic 372 (Topic 1: Classical Islamic Studies), Islamic Studies 340 (Topic 3), Middle Eastern Languages and Cultures 321 (Topic 15), Middle Eastern Studies 321K (Topic 11: Classical Islamic Studies), 342 (Topic 15). Prerequisite: Upper-division standing.

**Topic 16: The Qur'an.** Same as Islamic Studies 340 (Topic 2: The Qur'an), Middle Eastern Languages and Cultures 321 (Topic 9: The Qur'an), and Religious Studies 325G. The history, language and style, and themes of the Qur'an. Only one of the following may be counted: Arabic 372 (Topic 2: The Qur'an), Islamic Studies 340 (Topic 2), Middle Eastern Languages and Cultures 321 (Topic 9), Middle Eastern Studies 320 (Topic 14: The Qur'an), 342 (Topic 16), Religious Studies 325G. Prerequisite: Upper-division standing.

**Topic 17: Envisioning Muslims: The Middle Ages and Today.** Same as English 360S (Topic 3: Envisioning Muslims: The Middle Ages and Today). Covers the representation of Muslims in the dominant cultural media of the European Middle Ages and in the contemporary world of the twentieth and twenty-first centuries. Modern cultural media includes film and digital visual media. Readings are selected to show how Europeans envisioned Muslims, and how Muslims envisioned themselves. Only one of the following may be counted: English 360S (Topic 3), 379N (Topic: Envisioning Muslims), Islamic Studies 372 (Topic: Envisioning Muslims), Middle Eastern Studies 321K (Topic: Envisioning Muslims), 342 (Topic 17). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 18: Saracens in Medieval Literature.** Same as English 350E (Topic 2: Saracens in Medieval Literature). Muslims, Arabs, Turks, Persians, Berbers, and Moors were often identified in literature and historical texts under the invented group name Saracens. Course explores who, and what, a Saracen is. Includes selected readings of literature, historical documents, and critical scholarship on Saracens in European medieval romances and epics, crusade literature, travel narratives, maps, and polemical treatises. For critical contrast, readings also include Islamic texts on, or by some of the most famous (or infamous) Saracens known to medieval Europe. Only one of the following may be counted: English 350E (Topic 2), 379N (Topic: Saracens in Medieval Literature), Middle Eastern Studies 321K (Topic: Saracens in Medieval Literature), Middle Eastern Studies 342 (Topic 18). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 19: Self-Revelation in Women's Writing.** Same as African and African Diaspora Studies 374 (Topic 26: Self-Revelation in Women's Writing), Comparative Literature 323 (Topic 4: Self-Revelation in Women's Writing), and Women's and Gender Studies 340 (Topic 14: Self-Revelation in Women's Writing). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 26), Comparative Literature 323 (Topic 4), English 376L (Topic 9: Self-Revelation in Women's Writing), Middle Eastern Studies 322K (Topic 26: Self-Revelation in Women's Writing), 342 (Topic 19), Persian 361 (Topic: Self-Revelation in Women's Writing). Prerequisite: Upper-division standing.

**Topic 20: Autobiography: A Modern Literary Species.** Same as African and African Diaspora Studies 374 (Topic 25: Autobiography: A Modern Literary Species) and Comparative Literature 323 (Topic 3: Autobiography: A Modern Literary Species). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 25), Comparative Literature 323 (Topic 3), English 379N (Topic 5: Autobiography: A Modern Literary Species), Middle Eastern Studies 322K (Topic 25: Autobiography: A Modern Literary

Species), 342 (Topic 20), Women's and Gender Studies 340 (Topic: Autobiography: A Modern Literary Species). Prerequisite: Upper-division standing.

**Topic 21: Rome and Jerusalem.** Same as Ancient History and Classical Civilization 325 (Topic 3: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7: Rome and Jerusalem), and Religious Studies 365 (Topic 1: Rome and Jerusalem). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Ancient History and Classical Civilization 325 (Topic 3), Classical Civilization 348 (Topic: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7), Middle Eastern Studies 320 (Topic 2: Rome and Jerusalem), 342 (Topic 21), Religious Studies 365 (Topic 1), Urban Studies 353 (Topic: Rome and Jerusalem). Prerequisite: Upper-division standing.

**Topic 22: Biblical Archaeology.** Only one of the following may be counted: Anthropology 324L (Topic: Biblical Archaeology), History 364G (Topic: Biblical Archaeology), Jewish Studies 361 (Topic: Biblical Archaeology), Middle Eastern Studies 342 (Topic 22), Religious Studies 353 (Topic: Biblical Archaeology). Prerequisite: Upper-division standing.

**Topic 23: The Dead Sea Scrolls.** Same as History 364G (Topic 3: The Dead Sea Scrolls), Jewish Studies 364 (Topic 4: The Dead Sea Scrolls), and Religious Studies 353D. Only one of the following may be counted: History 364G (Topic 3), Jewish Studies 361 (Topic 4: The Dead Sea Scrolls), 364 (Topic 4), Middle Eastern Studies 320 (Topic 13: The Dead Sea Scrolls), 342 (Topic 23), Religious Studies 353D. Prerequisite: Upper-division standing.

**Topic 24: Sufism and Islamic Mysticism.** Same as Islamic Studies 340 (Topic 4: Sufism and Islamic Mysticism) and Religious Studies 358 (Topic 4: Sufism and Islamic Mysticism). Muslim debates of Sufism; the historical development of Sufi beliefs regarding theology, religious laws, expression, and popular social practices. Only one of the following may be counted: Asian Studies 340 (Topic: Sufism and Islamic Mysticism), History 364G (Topic: Sufism and Islamic Mysticism), Islamic Studies 340 (Topic 4), 372 (Topic 10: Sufism: Islamic Mysticism and Spirituality), Middle Eastern Studies 320 (Topic 16: Sufism: Islamic Mysticism and Spirituality), 321K (Topic: Sufism and Islamic Mysticism), 342 (Topic 24), Religious Studies 341 (Topic: Sufism and Islamic Mysticism), 358 (Topic 4). Prerequisite: Upper-division standing.

**Topic 25: Politics of Court Literature.** Same as Arabic 360L (Topic 3: Politics of Court Literature) and Islamic Studies 373 (Topic 6: Politics of Court Literature). Only one of the following may be counted: Arabic 360L (Topic 3), Comparative Literature 323 (Topic: Politics of Court Literature), Islamic Studies 372 (Topic 19: Politics of Court Literature), 373 (Topic 6), Middle Eastern Studies 321K (Topic 14: Politics of Court Literature), 342 (Topic 25). Prerequisite: Upper-division standing; Arabic 120D and 420L with a grade of at least C in each, or Arabic 531L with a grade of at least C.

**Topic 26: Arab Women Poets.** Same as Arabic 360L (Topic 2: Arab Women Poets) and Islamic Studies 373 (Topic 7: Arab Women Poets). Only one of the following may be counted: Arabic 360L (Topic 2), Comparative Literature 323 (Topic: Arab Women Poets), Islamic Studies 372 (Topic 14: Arab Women Poets), 373 (Topic 7), Middle Eastern Studies 323K (Topic 4: Arab Women Poets), 342 (Topic 26). Prerequisite: Upper-division standing; Arabic 120D and 420L with a grade of at least C in each, or Arabic 531L with a grade of at least C.

### MES 343. Topics in the Middle East: History.

Three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Middle Eastern Studies 320,

321K, 322K, 323K, 324K, 325, 326, 328, 343. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Modern Egypt: A History.** Same as History 334E and Islamic Studies 373 (Topic 5: Modern Egypt: A History). Critically examines the social, political, and intellectual dynamics that shaped the different forms of political community, economic organization, and public culture over the past century. Covers colonialism, liberalism, Arab socialism, authoritarian capitalism, and Islamic republicanism. Only one of the following may be counted: Arabic 372 (Topic: Modern Egypt: A History), History 334E, History 364G (Topic: Modern Egypt: A History), Islamic Studies 372 (Topic: Modern Egypt: A History), 373 (Topic 5), Middle Eastern Studies 322K (Topic: Modern Egypt: A History), 343 (Topic 1). Prerequisite: Upper-division standing.

**Topic 2: Re-forming the Arab East, 1914-Present.** Same as History 331R. Introduction to the history of the Middle East in the twentieth century. Examines forces that transformed the area from a relatively peaceful region to a radicalized environment. Explores colonialism, nationalism, secular modernism, impact of Zionism, rise of political Islam, status of women, and the oil revolution. Only one of the following may be counted: History 331R, History 364G (Topic: Re-forming the Arab East), Middle Eastern Studies 322K (Topic: Re-forming the Arab East), 343 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: History of Iran to 1800.** Same as History 331G. A survey of the social, economic, and religious components unique to Iran from the pre-Islamic empire of the Achaemenids through the development of Iran as a medieval and premodern Islamic state. Only one of the following may be counted: History 331G, Middle Eastern Studies 321K (Topic 3 History of Iran to 1800), 343 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: Islamic Spain and North Africa to 1492.** Same as History 375D and Religious Studies 345. An introduction to the impact of Islam on Spain and North Africa, with emphasis on social, economic, and cultural development. Only one of the following may be counted: Ancient History and Classical Civilization 330 (Topic: Islamic Spain and North Africa to 1492), History 375D, Islamic Studies 373 (Topic: Islamic Spain and North Africa to 1492), Middle Eastern Studies 321K (Topic 4: Islamic Spain and North Africa to 1492), 343 (Topic 4), Religious Studies 345, 363 (Topic: Islamic Spain and North Africa to 1492). Prerequisite: Upper-division standing.

**Topic 5: Medieval Islam: Faith and History.** Same as History 350L (Topic 34: Medieval Islam: Faith and History) and Religious Studies 358 (Topic 2: Medieval Islam: Faith and History). Only one of the following may be counted: History 350L (Topic 34), Middle Eastern Studies 321K (Topic 7: Medieval Islam: faith and History), 343 (Topic 5), Religious Studies 358 (Topic 2). Prerequisite: Upper-division standing.

**Topic 6: Modern Iran.** Same as History 331L. The development of modern Iran; special attention is given to the impact of the West, the constitutional movement, nationalism, the oil crisis, and the Islamic Revolution of 1979. Only one of the following may be counted: History 331L, Middle Eastern Studies 323L, 324K (Topic 5: Modern Iran), 343 (Topic 6). Prerequisite: Upper-division standing.

### MES 351. Mediterranean Crossroads Seminar.

Reading and discussion about the lands, cultures, and societies of the eastern Mediterranean from a variety of disciplinary perspectives. Students prepare to study in the Middle East (in Middle Eastern Studies 352) and begin work on their individual research projects. Three lecture hours a week for one semester. Offered in the spring semester only. Middle Eastern Studies 322K (Topic: Mediterranean



Crossroads Seminar) and 351 may not both be counted. Prerequisite: Upper-division standing and consent of instructor.

### **MES 352. Mediterranean Crossroads Study Abroad Seminar.**

Students study and conduct research in the Middle East. The equivalent of three lecture hours a week for one semester. Offered in the summer session only. Middle Eastern Studies 322K (Topic: Mediterranean Crossroads Study Abroad Seminar) and 352 may not both be counted. Prerequisite: Middle Eastern Studies 351.

### **MES 353. Mediterranean Crossroads Conference Course.**

Under supervision of a faculty member, students complete their research projects following participation in Middle Eastern Studies 352. Conference course. Offered in the fall semester only. Prerequisite: Middle Eastern Studies 352.

### **MES 360. Conference Course.**

Supervised individual research, discussion, and writing of papers about various general and specialized Middle Eastern subjects. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **MES 370. Practicum: Internships in Applied Middle Eastern Studies.**

Research and staff experience working in an appropriate agency or business. At least six but no more than nine hours of work a week for one semester. May not be repeated for credit. Prerequisite: Completion of at least seventy semester hours of coursework, including twelve hours of Middle Eastern studies, and consent of the undergraduate adviser.

### **MES 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a special topic in middle eastern studies, to be completed during the second semester. Conference course for two semesters. Prerequisite: For 679HA, admission to the Middle Eastern Studies Honors Program; for 679HB, Middle Eastern Studies 679HA.

## **Persian: PRS**

### **Lower-Division Courses**

#### **PRS 601C. Intensive Persian I.**

First semester of intensive Persian language instruction. Six lecture hours a week for one semester. Persian 601C and 506 may not both be counted. Persian 601C and 507 may not both be counted.

#### **PRS 506. First-Year Persian I.**

Elementary colloquial Persian. Five lecture hours a week for one semester. Persian 601C and 506 may not both be counted.

#### **PRS 507. First-Year Persian II.**

Continuation of Persian 506. Elementary literary Persian. Five lecture hours a week for one semester. Persian 601C and 507 may not both be counted. Prerequisite: Persian 506 with a grade of at least C.

#### **PRS 611C. Intensive Persian II.**

Second semester of intensive Persian language instruction. Six lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312K, 512K. Only one of the following

may be counted: Persian 611C, 612C, 312L, 512L. Prerequisite: Persian 601C or 507 with a grade of at least C.

#### **PRS 612C. Intensive Persian for Heritage Speakers.**

Designed for heritage Persian language speakers who have had little or no formal instruction in the language. Six lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312K, 512K. Only one of the following may be counted: Persian 611C, 612C, 312L, 512L.

#### **PRS 512K. Second-Year Persian I.**

Not open to native speakers of Persian. Five lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312K, 512K. Prerequisite: Persian 507 with a grade of at least C.

#### **PRS 512L. Second-Year Persian II.**

Not open to native speakers of Persian. Continuation of Persian 512K. Five lecture hours a week for one semester. Only one of the following may be counted: Persian 611C, 612C, 312L, 512L. Prerequisite: Persian 512K (or 312K) with a grade of at least C.

#### **PRS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Persian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

#### **PRS 322K. Intermediate Persian I.**

Not open to native speakers of Persian. First semester of intermediate Persian language instruction. Three lecture hours a week for one semester. Prerequisite: Persian 611C, 612C, or 512L (or 312L) with a grade of at least C.

#### **PRS 322L. Intermediate Persian II.**

Not open to native speakers of Persian. Second semester of intermediate Persian language instruction. Three lecture hours a week for one semester. Prerequisite: Persian 322K with a grade of at least C.

#### **PRS 329. Topics in Persian Language, Literature, and Culture.**

Study of various aspects of Persian linguistics, literature, and culture. Conducted in Persian. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**Topic 1: Ferdowsi's Shahnameh.**

**Topic 2: Sa'di's Golestan.** Additional prerequisite: Persian 512L (or 312L).

**Topic 3: Hafez's Ghazals.**

**Topic 4: Sadeq Hedayat and Twentieth-Century Persian Fiction.**

**Topic 5: Forugh Farrokhzad and Modernist Persian Poetry.**

**Topic 6: Persian Prose Nonfiction.**



**PRS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Persian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**PRS 130D. Persian across Disciplines.**

Students read and discuss Persian language materials related to the subject matter of another designated course. One lecture hour a week for one semester. No more than three semester hours may be counted toward the major in either Middle Eastern Studies or Middle Eastern Languages and Culture. May be repeated for credit. Prerequisite: Upper-division standing, Persian 322L, and consent of instructor.

**PRS 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Persian Language and Literature Honors Program; for 679HB, Persian 679HA.

## **Turkish: TUR**

### **Lower-Division Courses**

**TUR 601C. Intensive Turkish I.**

First semester of intensive Turkish language instruction. Six lecture hours a week for one semester. Turkish 601C and 506 may not both be counted. Turkish 601C and 507 may not both be counted.

**TUR 506. First-Year Turkish I.**

Modern Standard Turkish. Five lecture hours a week for one semester. Turkish 601C and 506 may not both be counted.

**TUR 507. First-Year Turkish II.**

Modern Standard Turkish. Continuation of Turkish 506. Five lecture hours a week for one semester. Turkish 601C and 507 may not both be counted. Prerequisite: Turkish 506 with a grade of at least C.

**TUR 611C. Intensive Turkish II.**

Second semester of intensive Turkish language instruction. Six lecture hours a week for one semester. Turkish 611C and 412K may not both be counted. Turkish 611C and 412L may not both be counted. Prerequisite: Turkish 601C or 507 with a grade of at least C.

**TUR 412K. Second-Year Turkish I.**

Conversational Turkish and readings in contemporary Turkish literature and newspapers. Review of the grammar covered in Turkish 506 and 507, and introduction of more complex grammatical patterns. Four lecture hours a week for one semester. Turkish 611C and 412K may not both be counted. Prerequisite: Turkish 601C or 507 with a grade of at least C.

**TUR 412L. Second-Year Turkish II.**

Continuation of Turkish 412K. Four lecture hours a week for one semester. Turkish 611C and 412L may not both be counted. Prerequisite: Turkish 412K with a grade of at least C.

**TUR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Turkish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

**TUR 320K. Intermediate Turkish I.**

Not open to native speakers of Turkish. Intermediate to high-level Turkish in four basic language skills: speaking, listening, reading, and writing. Turkish culture. Three lecture hours a week for one semester. Prerequisite: Turkish 611C or 412L with a grade of at least C.

**TUR 320L. Intermediate Turkish II.**

Not open to native speakers of Turkish. Continuation of Turkish 320K. Three lecture hours a week for one semester. Prerequisite: Turkish 320K with a grade of at least C.

**TUR 329. Topics in Turkish Language, Literature, and Culture.**

Conducted in Turkish. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and Turkish 611C or 412L with a grade of at least C.

**TUR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Turkish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Middle Eastern Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**TUR 130D. Turkish across Disciplines.**

Students read and discuss Turkish language materials related to the subject matter of another designated course. One lecture hour a week for one semester. No more than three semester hours may be counted toward the major in either Middle Eastern Studies or Middle Eastern Languages and Culture. May be repeated for credit. Prerequisite: Upper-division standing, Turkish 320L, and consent of instructor.

**TUR 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper. Conference course for two semesters. Prerequisite: For 679HA, admission to the Turkish Language and Literature Honors Program; for 679HB, Turkish 679HA.

# Department of Philosophy

There are several courses offered each year in philosophy that should be of interest to undergraduates who have strong interests outside philosophy. In addition to the introductory courses (Philosophy 301, 304, 305, and 310) and the basic sequence in the history of philosophy (Philosophy 329K and 329L), the courses listed below are of particular relevance to students who are interested in the indicated areas.

- Business: Philosophy 312, 322, and 325L
- Communications: Philosophy 311, 312, 313, and 332
- Computer science: Philosophy 313K, 344K, 358, 363, and 363L
- Law: Philosophy 311, 312, 313, 318, 325K, 342, and 347
- Linguistics: Philosophy 313K, 332, 344K, and 358
- Literature: Philosophy 346, 348, 349, 356, 361K, and 366K
- Mathematics: Philosophy 313K, 344K, 344M, and 358
- Natural sciences: Philosophy 322, 363, and 363L
- Premedicine and pre dentistry: Philosophy 312, 318, 322, 325M, and 363
- Social sciences: Philosophy 322, 363, and 363L

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Philosophy: PHL

### Lower-Division Courses

#### **PHL 301 (TCCN: PHIL 1301). Introduction to Philosophy.**

Primarily for lower-division students. A survey of principal topics and problems in areas such as ethics, theory of knowledge, and philosophy of religion. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 301 and 610QA may not both be counted.

#### **PHL 301K (TCCN: PHIL 2316). Ancient Philosophy.**

Primarily for lower-division students. An introduction to the philosophical achievements of the ancient world, concentrating on Plato and Aristotle. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 301L. Early Modern Philosophy.**

Primarily for lower-division students. An introduction to the philosophical achievements of the seventeenth and eighteenth centuries, concentrating on such figures as Descartes, Hume, and Kant. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 302. World Philosophy.**

Primarily for lower-division students. Basic issues of philosophy in Western and non-Western traditions, such as the nature of philosophy, its relation to religion and science, the self, knowledge, and virtue. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Asian Studies 301M (Topic 7: World Philosophy) and Philosophy 302 may not both be counted.

#### **PHL 302C. Ethics and Enlightenment.**

Primarily for lower-division students. A study of non-Western ethics, especially in Hindu and Buddhist traditions. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 303. Human Nature.**

Primarily for lower-division students. Theories of human nature, such as those of Plato, Christianity, Marxism, and existentialism. Modern psychological and biological theories are included, as the interplay of nature and nurture in determining human conduct is explored. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 303M. Mind and Body.**

Primarily for lower-division students. Introduction to philosophical issues about the nature of mind and its relation to body: What is mind? Do people have free will? How does psychology relate to neuroscience? Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 304. Contemporary Moral Problems.**

Primarily for lower-division students. Philosophical examination of selected moral problems arising out of contemporary society and culture. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 305 (TCCN: PHIL 2321). Introduction to the Philosophy of Religion.**

Same as Religious Studies 305. Primarily for lower-division students. A critical examination of various conceptions of God and of the relationship of the human and the divine. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **PHL 306. Philosophical Thinkers.**

Primarily for lower-division students. An introduction to major areas of philosophy through the study of selected philosophical thinkers. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.

#### **PHL 310. Knowledge and Reality.**

An introduction to basic issues in epistemology and metaphysics. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 310 and 610QA may not both be counted. Prerequisite: Some sections are restricted to philosophy majors, some to students with a University grade point average of at least 3.00 or consent of instructor; these sections are identified in the Course Schedule.

#### **PHL 610Q. Problems of Knowledge and Valuation.**

Restricted to students in the Plan II Honors Program. Methods and aims of selected sciences, arts, and philosophy in the attainment of knowledge and in providing the basis for valuation. Three lecture hours and one discussion hour a week for two semesters. Philosophy 301 and 610QA may not both be counted; Philosophy 310 and 610QA may not both be counted; Philosophy 610QB and 318 may not both be counted. Prerequisite: For 610QA, admission to the Plan II Honors Program; for 610QB, Philosophy 610QA.

**PHL 311. Argument.**

Argument as a kind of discourse: deductive and inductive arguments; principles of reasoning; fallacies; practical applications. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

**PHL 312 (TCCN: PHIL 2303). Introduction to Logic.**

Logical structure of sentences and arguments; elementary symbolic methods; applications. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May not be counted by students with prior credit for Philosophy 313, 313K, 313Q, or 344K.

**PHL 313. Introductory Symbolic Logic.**

Introduction to symbolic logic (through first-order predicate logic); interpretations; formal proofs, consistency; some practical applications. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q.

**PHL 313K. Logic, Sets, and Functions.**

Sets, relations, functions, sentential and predicate logic, proof techniques, algorithms, and elementary metatheory. Mathematically oriented. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Prerequisite: Three years of high school mathematics.

**PHL 313Q. Logic and Scientific Reasoning.**

Introduction to formal proofs, semantics, quantifiers, inductive methods, decision theory, and scientific reasoning. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Philosophy 313Q and Tutorial Course 310 may not both be counted. Prerequisite: Admission to the Plan II Honors Program.

**PHL 316K. Science and Philosophy.**

Introduction to scientific method, including discussion of the nature and goals of science. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May not be counted by students with credit for Philosophy 363.

**PHL 317K. Introduction to the Philosophy of the Arts.**

Classic issues in the philosophy of art and beauty, illustrated from the fine arts and contemporary media: literature, drama, music, painting, film, and television. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

**PHL 318 (TCCN: PHIL 2306). Introduction to Ethics.**

Study of basic principles of the moral life, with critical examination of traditional and contemporary theories of the nature of goodness, happiness, duty, and freedom. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 610QB and 318 may not both be counted.

**PHL 318K (TCCN: PHIL 2307). Introduction to Political Philosophy.**

Views of major political philosophers on humanity, nature, and society; discussions of contemporary political ideologies. Three lecture hours or

two lecture hours and one laboratory/discussion hour a week for one semester.

**PHL 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Philosophy.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Philosophy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses****PHL 321K. Theory of Knowledge.**

Systematic and detailed study of major issues in the theory of knowledge, such as the distinction between knowledge and belief, the criteria of knowledge, the justification of knowledge-claims, and perception. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 322. Science and the Modern World.**

The historical development and impact of scientific ideas through the modern period to the present. Three lecture hours a week for one semester.

**PHL 322K. History of Ethics.**

Survey of ethical theories from ancient times through the nineteenth century. Three lecture hours a week for one semester.

**PHL 323K. Metaphysics.**

Problems of substance, change, categories of being, mind, body, space and time, approached either systematically or historically. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 323M. Philosophy of Mind.**

Problems concerning the nature of mind and mental phenomena: the relation between mind and body, knowledge of other minds, the computational model of mind, mental causation, intentionality, and consciousness. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 325C. Environmental Ethics.**

Moral issues concerning the relation of human beings to the environment, including biodiversity, resource depletion, and animal rights. Three lecture hours and one discussion hour a week for one semester.

**PHL 325K. Ethical Theories.**

Major traditional and contemporary ethical theories discussed and critically examined. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 325L. Business, Ethics, and Public Policy.**

Issues in ethics and politics that are relevant to the organization of business and industry and the distribution of power in society; topics include the role of industry; concepts of profit, property, and moral responsibility. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

**PHL 325M. Medicine, Ethics, and Society.**

Moral, legal, religious, and political implications of developments in medicine; topics include abortion, euthanasia, sterilization, psychosurgery, genetic engineering; concepts of health, cure, insanity, and death. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

**PHL 327. Contemporary Philosophy.**

Currents of contemporary thought; past topics include feminism, philosophy, and science; ideas of the twentieth century; twentieth-century philosophy of mind. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**PHL 328. Nineteenth-Century Philosophy.**

Major figures in nineteenth-century European philosophy, including Hegel, Schopenhauer, Kierkegaard, Nietzsche, and Mill. Three lecture hours a week for one semester. Prerequisite: Three semester hours of coursework in philosophy.

**PHL 329K. History of Ancient Philosophy.**

Same as Classical Civilization 348 (Topic 4: History of Ancient Philosophy). Development of Western philosophy from the pre-Socratics to the early Christian era; emphasis on Plato and Aristotle. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Classical Civilization 342 (Topic: History of Ancient Philosophy), 348 (Topic 4), Philosophy 329K. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 329L. Early Modern Philosophy: Descartes to Kant.**

Three lecture hours and one discussion hour a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 329M. Philosophical Classics.**

Intensive study of one or two important philosophers or philosophical works from the eighteenth century or earlier. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Three semester hours of coursework in philosophy.

**Topic 1: Kant's Critique of Pure Reason.** An intensive study of Kant's Critique of Pure Reason, focusing especially on his "Copernican revolution," his theories of categories and concepts, and his rejection of metaphysics.

**PHL 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Philosophy.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Philosophy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**PHL 329U. Perspectives on Science and Mathematics.**

An examination of five notable episodes in the history of science: Galileo's conflict with the Catholic Church, Isaac Newton's formulation of the laws of motion, Charles Darwin's proposal of the theory of evolution by natural selection, the development of the atomic bomb, and the discovery of the double helix structure of DNA. Three lecture hours a week for one semester. Only one of the following may be counted: History 329U, 366N (Topic: Perspectives on Science and

Mathematics), Philosophy 329U. Prerequisite: Upper-division standing and consent of instructor.

**PHL 330K. Ancient Philosophy after Aristotle.**

Same as Classical Civilization 330K. Epicureans, Stoics, Skeptics, Plotinus and the Neoplatonist tradition. No knowledge of Greek is required. Three class hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 332. Philosophy of Language.**

Contemporary theories of meaning and linguistic structure, and their relationships to epistemology, metaphysics, and ethics. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in philosophy.

**PHL 334K. Modern Thinkers.**

Critical study of the philosophical implications of the works of selected modern thinkers; for example, Nietzsche, Sartre, Camus, and Freud. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Three semester hours of coursework in philosophy.

**Topic 1: Modernity and Postmodernity.** Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

**PHL 342. Political Philosophy.**

Critical examination of leading theories of the state, including analysis of such concepts as sovereignty, obligation, rights, and freedom. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.

**PHL 344K. Intermediate Symbolic Logic.**

Same as Mathematics 344K. A second-semester course in symbolic logic: formal syntax and semantics, basic metatheory (soundness, completeness, compactness, and Loewenheim-Skolem theorems), and further topics in logic. Three lecture hours a week for one semester. Prerequisite: Philosophy 313, 313K, or 313Q.

**PHL 344M. Philosophy of Mathematics.**

Philosophical issues concerning mathematics and its foundations, such as the correlation of mathematics to logic, mathematical truth, and mathematical knowledge. Three lecture hours a week for one semester.

**PHL 346. Aesthetics.**

Study of selected topics in the philosophy of art; may be restricted to one or several specific art forms or media: literature, painting, music, film, television, or theatre. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**PHL 347. Philosophy of Law.**

The significance and function of law in political and ethical contexts; comparison of common and statutory to scientific and moral law; readings from among Plato, Kant, Hegel, Bentham, Austin, Hart, Dworkin, Feinberg, and others. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

**PHL 348. Asian Philosophy.**

Comparative and historical studies in the philosophical and religious traditions of the East, with emphasis on India and China. Three lecture



hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Indian Philosophies.** Same as Asian Studies 372 (Topic 2: Indian Philosophies) and Religious Studies 341 (Topic 1: Indian Philosophies).

### **PHL 349. History of Medieval and Renaissance Philosophy.**

Philosophical thought from Augustine through Cusanus and Vico, with emphasis on its cultural bearing. Three lecture hours a week for one semester. Prerequisite: Three semester hours of coursework in philosophy.

### **PHL 354. Philosophy in Context.**

Philosophical texts and arguments in a broad intellectual and cultural context, or other texts studied for their philosophical content. Typical topics include Locke and the Glorious Revolution; materialism and modern science; Thucydides on power and justice. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **PHL 356. Philosophy of Religion.**

Meaning and function of religion; religious belief and its validity; religious values in the modern world. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary.

**Topic 2: Yoga as Philosophy and Practice.** Only one of the following may be counted: Philosophy 356 (Topic 2), 356 (Topic: Yoga as Philosophy and Practice), Religious Studies 341G.

### **PHL 358. Philosophical Logic.**

Issues in philosophical logic and its applications, such as theories of meaning, logical paradoxes, epistemic logic, deontic logic, modal logic, existence, and identity. Three lecture hours a week for one semester. Prerequisite: Philosophy 313, 313K, or 313Q.

### **PHL 361K. Philosophy in Literature.**

Formulation, analysis, and criticism of philosophical ideas in selected literary works. Three lecture hours a week for one semester.

### **PHL 363. Scientific Method.**

History, exposition, and analysis of such fundamental concepts in the natural and social sciences as explanation, prediction, discovery, confirmation, laws, hypotheses, theories. Three lecture hours a week for one semester.

### **PHL 363L. Topics in Philosophy of Science.**

Past topics include philosophy of biology; scientific hypotheses and evidence; philosophical consequences of quantum mechanics. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary.

**Topic 1: The Philosophy of Biology.** Philosophy 363L (Topic 1) and 363L (Topic: Philosophy of Biology) may not both be counted.

### **PHL 365. Selected Problems in Philosophy.**

Past topics include Jewish ethics; change, truth, and justice. The equivalent of three lecture hours a week for one semester. May be

repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Freudians and Feminisms.** Same as Germanic Civilization 362E (Topic 1: Freudians and Feminisms) and Women's and Gender Studies 345 (Topic 10: Freudians and Feminisms). Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 2: Introduction to Cognitive Science.** Same as Cognitive Science 360 (Topic 1: Introduction to Cognitive Science) and Linguistics 373 (Topic 7: Introduction to Cognitive Science).

**Topic 3: Cultural Politics of Kant and Hegel.** Same as Germanic Civilization 360E (Topic 2: Cultural Politics of Kant and Hegel). Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 4: Contemporary European Social Theory.** Same as Government 335M (Topic 8: Contemporary European Social Theory) and Sociology 352M (Topic 7: Contemporary European Social Theory). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

**Topic 5: Contemporary American Social Theory.** Same as Government 335M (Topic 9: Contemporary American Social Theory) and Sociology 352M (Topic 8: Contemporary American Social Theory). Only one of the following may be counted: Government 335M (Topic: Social Theory), 335M (Topic 9), Philosophy 365 (Topic 5), Sociology 352M (Topic 8). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **PHL 366K. Existentialism.**

Existentialism and its relationship to literature, psychoanalysis, and Marxism. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. Philosophy 366K and Religious Studies 356E may not both be counted.

### **PHL 371H. Philosophy Honors.**

Close study of major works of philosophy. Three lecture hours and one discussion hour a week for one semester. May be repeated for credit. Prerequisite: Six semester hours of coursework in philosophy and a University grade point average of at least 3.50.

### **PHL 375M. Major Seminar.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Nine semester hours of coursework in philosophy.

### **PHL 679H. Honors Tutorial Course.**

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a special topic in philosophy, to be completed during the second semester. Conference course for two semesters. Prerequisite: For 679HA, admission to the Philosophy Honors Program; for 679HB, Philosophy 679HA.

### **PHL 379K. Conference Course.**

Intensive tutorial study of selected problems in philosophy. Conference course. May be repeated for credit. Prerequisite: Nine semester hours

of upper-division coursework in philosophy and consent of instructor and the undergraduate adviser in philosophy.

## Plan II Honors Program

### Social Science: S S

#### Lower-Division Courses

##### S S 301. Honors Social Science.

An introduction to the study of the individual, society, or culture using the methods of one of the social sciences. Three lecture hours a week for one semester. With consent of the director of Plan II, may be repeated once for elective credit. Prerequisite: Admission to the Plan II Honors Program.

### Tutorial Course: T C

#### Lower-Division Courses

##### T C 302. First-Year Signature Course: Plan II.

Restricted to first-year Plan II students. Small-group seminar involving reading, discussion, writing, and oral reporting around a central interdisciplinary topic. Designed to introduce undergraduates to scholarly analysis from an interdisciplinary perspective. Includes an introduction to University resources, such as research facilities, museums, and attendance at University lectures or performances as assigned. Multiple sections may be offered in the fall and spring with various topics and instructors. Three lecture hours a week for one semester. Some sections may require additional meeting times; these are identified in the Course Schedule. Only one of the following may be counted: Tutorial Course 301, 302, Undergraduate Studies 302, 303.

##### T C 603. Composition and Reading in World Literature.

Reading of masterpieces of world literature and intensive training in writing and in critical analysis of literature. Three lecture hours a week for two semesters. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A; only one of the following may be counted: Comparative Literature 315, English 603B, 316K, Tutorial Course 603B. Prerequisite: For 603A, admission to the Plan II Honors Program; for 603B, Tutorial Course 603A.

##### T C 310. Modes of Reasoning.

Introduction to forms of quantitative reasoning: computer science, game theory, operations research, or statistics and probability. Three lecture hours a week for one semester. Philosophy 313Q and Tutorial Course 310 may not both be counted. Prerequisite: Admission to the Plan II Honors Program.

#### Upper-Division Courses

##### T C 325. Topics in the Arts and Sciences.

Analysis of various topics within the arts and sciences through reading, research, written reports, and discussion. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing in the Plan II Honors Program or consent of instructor; additional prerequisites vary with the topic.

##### T C 125K. Topics in the Arts and Sciences.

Analysis of topics in the arts, sciences, and social sciences through reading, discussion, and lectures. The equivalent of one lecture hour a week for one semester. Some topics are offered on the pass/fail basis

only; these are identified in the Course Schedule. May be repeated for credit. Prerequisite: Upper-division standing in the Plan II Honors Program or consent of instructor.

##### T C 126. Plan II/Knowledge Is Power Program Charter Schools Partnership.

Restricted to students in the Plan II Honors Program. Mentorship of younger students attending an Austin-area Knowledge Is Power Program (KIPP) school. Through mentoring and class meetings, students will be deeply immersed in issues related to education reform, (in)equality of educational opportunity, and in promising strategies, such as those used by KIPP, for addressing such issues. The equivalent of one lecture hour and two hours of service a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Consent of instructor.

##### T C 330. Special Topics in Plan II.

Restricted to Plan II majors. Three lecture hours a week for one semester, with additional hours to be arranged. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

##### T C 357. The Junior Seminar.

Seminar sections of about fifteen students. The subjects vary, but in each the attempt is made through careful reading, discussion, and written work to analyze and compare varied approaches to topics of lasting importance. Three lecture hours a week for one semester. Students must take this course twice with different topics to fulfill degree requirements; with consent of the director of Plan II, a third topic may be taken as an elective. Prerequisite: Upper-division standing in Plan II.

##### T C 359T. Essay Course.

Directed reading followed by the writing of an essay. Conference course. Prerequisite: Two semesters of Tutorial Course 357 and consent of the director.

##### T C 660H. Thesis Course.

Directed reading followed by the writing of a substantial essay. Conference course for two semesters. Prerequisite: For 660HA, two semesters of Tutorial Course 357 and consent of the director; for 660HB, Tutorial Course 660HA.

## Department of Psychology

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### Psychology: PSY

#### Lower-Division Courses

##### PSY 301 (TCCN: PSYC 2301). Introduction to Psychology.

Basic problems and principles of human experience and behavior. Three lecture hours a week for one semester, or the equivalent in independent study.

**PSY 304 (TCCN: PSYC 2308). Introduction to Child Psychology.**

General introduction to physical, social, and cognitive development from conception onward. Three lecture hours a week for one semester. Psychology 304 and 333D may not both be counted. Prerequisite: Psychology 301 with a grade of at least C.

**PSY 305. Introduction to Cognitive Psychology.**

Introduction to the study of how people perceive, act, communicate, and reason. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.

**PSY 308. Biopsychology.**

Introduction to the biological bases of psychological processes and behavior. Overview of the physiology and anatomy of the nervous system, followed by a survey of brain mechanisms of perception, cognition, learning, and emotion; biological perspectives on drug action and mental disease. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.

**PSY 309 (TCCN: PSYC 2316). Personality.**

Research and theory concerning personality structure, dynamics, development, and assessment. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.

**PSY 317 (TCCN: PSYC 2317). Statistical Methods in Psychology.**

Recommended for majors who plan to do graduate work in psychology or related fields. Measures of central tendency and variability; statistical inference; correlation and regression. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.

**PSY 418. Statistics and Research Design.**

Students may not enroll in Psychology 418 more than twice. Survey of statistics, including central tendency, variability and inference, and scientific methodology used in psychological research. Three lecture hours and two discussion hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C and credit for one of the following: Mathematics 302, 303D, 403K, 305G, 408C, 408K, 316; or Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

**PSY 319K (TCCN: PSYC 2319). Social Psychology.**

Theory and research on the analysis of human conduct in social settings. Three lecture hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C.

**PSY 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Psychology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Psychology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses**

**PSY 323. Perception.**

Theory and research in the ways we extract information from the environment. Three lecture hours a week for one semester.

Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

**PSY 323P. Perceptual Systems: Neurons, Behavior, and Evolution.**

An introduction to perceptual systems, with an emphasis on perception in human and nonhuman primates. Topics include the physics of perceptual stimuli, the neural processing of perceptual information, the performance of human and other primates in perceptual tasks, and the evolution of perceptual systems. Three lecture hours a week for one semester. Psychology 323P and 341K (Topic: Perceptual Systems: Neurons/Behavior/Evolution) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

**PSY 323S. Sex Differences in Cognition and Perception.**

Examination of facts, theories, and implications of sex differences in human cognition and perception. Topics include genetic and hormonal origins of sex differences, structural differences in the body and brain, verbal abilities, spatial abilities, learning, memory, sensory-motor abilities, and the auditory, olfactory, visual, and other sensory systems. Three lecture hours a week for one semester. Psychology 323S and 341K (Topic: Sex Differences in Cognition and Perception) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

**PSY 325K. Advanced Statistics.**

Advanced statistical theory and methods for analysis of behavioral sciences data; topics include analysis of variance and covariance, regression, and nonparametric techniques. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.



### **PSY 326K. Principles of Conditioning and Learning.**

Laws of animal and human learning, and the underlying mechanisms. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Psychology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Psychology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **PSY 332. Behavioral Neuroscience.**

Neuroscientific study of behavioral functions: fundamental structure and function of the human nervous system, sensory systems and perception, motor systems and behavior, motivation and learning, brain disorders and maladaptive behavior. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 332C. Hormones and Behavior.**

Neuroscientific study of hormones and behavior in animals and humans. Includes sexual behavior, sexual differentiation, parental behavior, aggressive behavior, feeding and drinking, stress, learning, and memory. Three lecture hours a week for one semester. Psychology 332C and 341K (Topic: Hormones and Behavior) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333C. Controversial Issues in Development.**

An exploration of questions in developmental psychology that are currently in dispute. Topics may include stem cell research, treatment of juveniles in the legal system, physician-assisted suicide, and methods of sex education. Three lecture hours a week for one semester. Psychology 333C and 341K (Topic: Controversial Issues in Development) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing,

Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333D. Introduction to Developmental Psychology.**

Physical, social, and cognitive development in humans. Three lecture hours a week for one semester. Psychology 304 and 333D may not both be counted. Psychology 333D and Women's and Gender Studies 345 (Topic 6: Introduction to Developmental Psychology) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333E. Identity Formation.**

An introduction to historical theories of and current research on identity, with particular focus on identity development in the domains of occupation, religion, politics and morality, gender, ethnicity, and adoption. Three lecture hours a week for one semester. Psychology 333E and 341K (Topic: Identity Formation) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333F. Fantasy and Reality.**

Examination of how children and adults decide what is real and what is not. Topics include the fantasy-reality distinction, magical thinking, and religious cognition. Three lecture hours a week for one semester. Psychology 333F and 341K (Topic: Fantasy and Reality) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333M. Infant Development.**

Examination of genetic and environmental determinants of social, perceptual, and cognitive development in infants from theoretical and research perspectives. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K,



Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333N. Cognitive Development.**

Overview of the development of thinking from infancy through childhood. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333P. Child Language.**

Examination of theory and research concerning the development of language in the child. Three lecture hours a week for one semester. Only one of the following may be counted: Linguistics 373 (Topic 1: Child Language), 373 (Topic: Language Acquisition), Psychology 333P. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333R. Social Development in Children.**

Development of social behavior (for example, sex typing and aggression) and social relationships. Three lecture hours a week for one semester. Psychology 333R and Women's and Gender Studies 345 (Topic 19: Social Development in Children) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333T. Adolescent Development.**

Physical, cognitive, social, and personality development during adolescence. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 333W. Moral Development.**

An introduction to theory and research on morality. Topics include culture and morality, Freudian and social learning perspectives

on moral development, Kohlberg's theory of morality, challenge to Kohlberg's theory, and cognitive, familial, and emotional influence on morality. Three lecture hours a week for one semester. Psychology 333W and 341K (Topic: Moral Development) may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 334D. Psychology of Human Mating.**

Mate selection, sources of conflict, and mating over the life span, studied in the context of evolutionary psychology and sexual selection theory. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 334E. Evolutionary Psychology.**

Fundamentals of evolutionary psychology, including issues of natural and sexual selection, adaptation, and domain-specific psychological mechanisms. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 337. Psychology of Language.**

Consideration of approaches to the study of language, its development in children, and its functioning; important research from psychology and linguistics. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 338K. Psychology of Reading.**

Theory and research on the reading process and its acquisition. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering

351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 339. Behavior Problems of Children.**

Adjustment difficulties during childhood and adolescence; causation and treatment. Three lecture hours a week for one semester.

Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 341K. Selected Topics in Psychology.**

Topics of contemporary interest that may vary from semester to semester. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

#### **Topic 4: Health Psychology.**

#### **Topic 7: Epidemiology.**

#### **Topic 8: Learning and the Brain.**

**Topic 12: Personality Assessment.** Theoretical and methodological issues involved in trying to understand and measure personality.

#### **Topic 14: Robot Cognition.**

**Topic 15: History of Modern Psychology.** A survey of the diverse roots of modern psychology, the competing schools that influenced psychology's development, and the perspectives that guide scholarship in present-day psychology. Psychology 341K (Topic 15) and 341K (Topic: History and Systems of Psychology) may not both be counted.

**Topic 16: Psychology of Fundamentalism.** Psychological research and theory on religious fundamentalism. Considers the nature of different forms of religious fundamentalism, and possible psychological mechanisms that motivate fundamentalism. Includes topics such as the development of fundamentalism, the movement from fundamentalism to terrorism, and fundamentalism and the family.

**Topic 17: Psychology and Religion.** An exploration of the psychological processes involved in religion. Discusses seminal psychological theories of religion, such as the work of James, Freud, Jung, and Maslow. Discussion of empirical work includes topics such as the development of religion across the life span, religious experience, conversion, and the effects of religion on mental and physical health.

#### **Topic 18: Language and Thought.**

### **PSY 343K. Substance Abuse.**

Causes of substance abuse: the evolutionary perspective, sex differences, predisposition, biological and cognitive theories; emphasis

on food and alcohol. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 345. Individual Differences.**

Study of person-to-person variation in intelligence, personality, and interests, with an emphasis on genetic and environmental determinants, developmental processes, and their relation to real-world outcomes. Three lecture hours a week for one semester. Psychology 341K (Topic: Individual Differences) and 345 may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 346K. Psychology of Sex.**

Development of sex from genes to human behavior. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 350. Motivation.**

Theory and research on motivation; biological and social determinants. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 352. Abnormal Psychology.**

Biological and social factors in the development and treatment of psychopathology. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 353K. Psychopharmacology.**

The pharmacology and the neurochemical, neurophysiological, and psychological effects of psychoactive drugs, with regard to their use as therapeutic and behavioral research tools. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 355. Cognition.**

Theoretical and critical analysis of the development, nature, and function of the thought process. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 355D. Animal Cognition.**

An introduction to animal intelligence and the evolution of mind. Examines what is known about intelligence in other animals, how intelligence is revealed in social and problem-solving behavior, and the ways in which human intelligence is structured by its evolutionary past. Three lecture hours a week for one semester. Psychology 341K (Topic: Animal Cognition) and 355D may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 355R. Reasoning and Decision Making.**

Survey of psychological research on how people reason and make decisions. Topics include mental models, causality, analogy, heuristics, emotion, motivation, culture, and decision making. Three lecture hours a week for one semester. Psychology 341K (Topic: Reasoning and Decision Making) and 355R may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 357. Undergraduate Research.**

Supervised research experience. Individual instruction. May not be counted toward a major in psychology. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: At least thirty semester hours of college coursework, Psychology 301 with a grade of at least C, and consent of instructor.

### **PSY 458. Experimental Psychology.**

Techniques of psychological research illustrated in a series of laboratory experiments. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, and a University grade point average of at least 3.25.

### **PSY 158H. Honors Research Tutorial.**

Enrollment restricted to students in the Psychology Honors Program. Individual instruction. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, and consent of the honors adviser.

### **PSY 359. Selected Topics: Readings: Tutorial.**

Supervised reading in selected topics of significance; area of intensive study is chosen by the student in consultation with the instructor. Individual instruction. May not be counted toward a major in psychology. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, Psychology 301 with a grade of at least C, and consent of instructor.

### **PSY 359H. Honors Research I.**

Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, six semester hours of upper-division coursework in psychology, a grade point average of at least 3.50 in psychology courses taken at the University, a University grade point average of at least 3.25, and consent of the honors adviser.

### **PSY 364. Introduction to Clinical Psychology.**

Introduction to techniques of assessment and treatment of psychopathology. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 364P. Positive Psychology and the Good Life.**

A survey of the emerging field of positive psychology, including assessment and determinants of well-being; human strengths and virtues; the good life considered from evolutionary, economic, sociological, and cross-cultural perspectives; and applications to issues such as social change. Three lecture hours a week for one semester. Psychology 341K (Topic: Positive Psychology and the Good Life) and 364P may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for others, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering



351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 365G. Gender and Racial Attitudes.**

Advanced introduction to the psychological study of gender and racial attitudes in children and adults, with emphasis on the causes, consequences, and revision of an individual's gender and racial stereotypes. Three lecture hours a week for one semester. Psychology 341K (Topic: Gender and Racial Attitudes) and 365G may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 365L. Advanced Social Psychology.**

Experimental research in social psychology, social influence, decision making, affiliation, risk taking, stress, and other topics. Three lecture hours a week for one semester. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for others, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 371. Learning and Memory.**

Analysis of theory and research in learning. Three lecture hours a week for one semester. Psychology 341K (Topic: Brain Mechanisms of Learning and Memory) and 371 may not both be counted. Prerequisite: For psychology majors, upper-division standing and Psychology 301 and 418 with a grade of at least C in each; for nonmajors, upper-division standing, Psychology 301 with a grade of at least C, and one of the following with a grade of at least C: Biology 318M, Civil Engineering 311S, Economics 329, Educational Psychology 371, Electrical Engineering 351K, Government 350K, Mathematics 316, 362K, Mechanical Engineering 335, Psychology 317, Sociology 317L, Social Work 318, Statistics 309, Statistics and Scientific Computation 302, 303, 304, 305, 306, 318.

### **PSY 377P, 677P. Undergraduate Practicum.**

Field experience in applied psychology. Students are supervised by faculty members and by practitioners in community agencies. One lecture hour and ten or twenty hours of fieldwork a week for one semester. May not be counted toward a major in psychology. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and consent of the practicum supervisor.

### **PSY 379H. Honors Research II.**

Three lecture hours a week for one semester. Prerequisite: Upper-division standing, Psychology 301 and 418 with a grade of at least C in each, Psychology 458 and 359H, and consent of the honors adviser.

## **Department of Religious Studies**

### **Religious Studies: R S**

#### **Lower-Division Courses**

#### **R S 302. History of the Religions of Asia.**

Same as Asian Studies 301R. Eastern religions: an introduction to the basic forms and the historical development of the religious traditions of India, China, and Japan. Three lecture hours a week for one semester.

#### **R S 304. Judaism, Christianity, and Islam: An Introduction.**

Same as History 304R, Islamic Studies 311 (Topic 2: Judaism, Christianity, and Islam: An Introduction), and Jewish Studies 311 (Topic 2: Judaism, Christianity, and Islam: An Introduction). Examines the intertwined historical development of the religions of Judaism, Christianity, and Islam, and explores the principal beliefs and practices of Jews, Christians, and Muslims. Three lecture hours a week for one semester.

#### **R S 305. Introduction to the Philosophy of Religion.**

Same as Philosophy 305. Primarily for lower-division students. A critical examination of various conceptions of God and of the relationship of the human and the divine. Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester.

#### **R S 306. Topics in Comparative Religion.**

Three lecture hours a week for one semester. Additional hours are required for some topics; these topics are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **R S 310. Introduction to the Study of Religion.**

Introduction to scholarly methods in the study of religion. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 301M (Topic 5: Introduction to the Study of Religion), Religious Studies 310, Sociology 313K.

#### **R S 312. Topics in the Religions of Asia.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **R S 312C. Introduction to Buddhism.**

Same as Asian Studies 301M (Topic 11: Introduction to Buddhism). A structural and historical overview of Buddhism through the examination of various schools, doctrines, biographical narratives, and contemporary ethical issues. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 301M (Topic 11), Religious Studies 312 (Topic: Introduction to Buddhism), 312C.

#### **R S 312D. Introduction to Hinduism.**

Same as Asian Studies 301M (Topic 12: Introduction to Hinduism). Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 301M (Topic 12), Religious Studies 312 (Topic: Introduction to Hinduism), 312D.



**R S 313. Topics in Judaism.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**R S 313M. Jewish Civilization: Beginnings to 1492.**

Same as History 306N (Topic 10: Jewish Civilization: Beginnings to 1492) and Jewish Studies 304M. Introduction to the history, culture, and religion of the Jewish people from around 1000 BC to the end of the medieval period. Subjects may include ancient Israel, late Second Temple sectarianism, the rise of Christianity, rabbinic Judaism, medieval Jewish philosophy, Jewish mysticism, and Hebrew poetry. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic: Jewish Civilization I), 306N (Topic 10), Jewish Studies 304M, 311 (Topic: Jewish Civilization I), Religious Studies 313 (Topic: Jewish Civilization I), 313M.

**R S 313N. Jewish Civilization: 1492 to the Present.**

Same as History 306N (Topic 11: Jewish Civilization: 1492 to the Present) and Jewish Studies 304N. Subjects may include trends toward secularization, the emancipation of European Jewry, the emergence of American Jewry, the Holocaust, the establishment of the State of Israel, and the Arab-Israeli conflict. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic 11), Jewish Studies 304N, 311 (Topic: Jewish Civilization: 1492 to the Present), Religious Studies 313 (Topic: Jewish Civilization: 1492 to the Present), 313N.

**R S 314. Topics in Islam.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**R S 315. Topics in Christian History.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**R S 315N. Introduction to the New Testament.**

Examines representative examples of the texts found in the Christian New Testament and selected noncanonical writings. Focuses on historical setting and systematic methods of interpretation. Three lecture hours a week for one semester. Only one of the following may be counted: Classical Civilization 304C (Topic: Introduction to the New Testament), Religious Studies 315 (Topic: Introduction to the New Testament), 315N.

**R S 316K. Topics in Religions of the Americas.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**R S 316U. Topics in Religions of the United States.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**R S 317. Topics in the Religions of Africa.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**R S 318. The Rise of Christianity.**

Same as Classical Civilization 318. Introduction to the origins and development of Christianity. Three lecture hours a week for one semester.

**R S 319. Introduction to Islam.**

Same as History 306N (Topic 7: Introduction to Islam) and Islamic Studies 310. The beliefs, theology, history, and main social and legal institutions of Islam, including the concept of God and society, the role of women, and Islamic government and movements. Three lecture hours a week for one semester. Only one of the following may be counted: History 306N (Topic 7), Islamic Studies 310, Middle Eastern Studies 310 (Topic 1: Introduction to Islam), Religious Studies 319.

**R S 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Religious Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Religious Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses****R S 321. History of Hindu Religious Traditions.**

Same as Anthropology 324L (Topic 23: History of Hindu Religious Traditions), Asian Studies 340 (Topic 4: History of Hindu Religious Traditions), and History 364G (Topic 1: History of Hindu Religious Traditions). History of major doctrines, practices, and institutions that shaped the development of Hinduism; how religions adapt to social and cultural change and often provide the catalyst for change. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**R S 322. History of Indian Buddhism.**

Same as Asian Studies 340 (Topic 5: History of Indian Buddhism). The institutional, social, economic, and doctrinal history of Buddhism in India. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

**R S 325. Prophet of Islam: His Life and Times.**

Same as History 364G (Topic 2: Prophet of Islam: His Life and Times) and Islamic Studies 340 (Topic 1: Prophet of Islam: His Life and Times). A detailed study of the prophet Muhammad's life and message, and of the means by which his life was recorded and popularized. Three lecture hours a week for one semester. Only one of the following may be counted: History 364G (Topic 2), Islamic Studies 340 (Topic 1), Middle Eastern Studies 321K (Topic 6: Prophet of Islam: His Life and Times), Religious Studies 325. Prerequisite: Upper-division standing.

**R S 325G. The Qur'an.**

Same as Islamic Studies 340 (Topic 2: The Qur'an), Middle Eastern Languages and Cultures 321 (Topic 9: The Qur'an), and Middle Eastern Studies 342 (Topic 16: The Qur'an). The history, language and style, and themes of the Qur'an. Three lecture hours a week for one semester. Only one of the following may be counted: Arabic 372 (Topic 2: The Qur'an), Islamic Studies 340 (Topic 2), Middle Eastern Languages and Cultures 321 (Topic 9), Middle Eastern Studies 320

(Topic 14: The Qur'an), 342 (Topic 16), Religious Studies 325G.  
Prerequisite: Upper-division standing.

### **R S 326. History of Religion in America since 1800.**

Same as History 351P. Introduction to the history of religion in the United States of America from the nineteenth century to the present. Focuses on how diverse peoples imagined and transformed the landscape, interacted with one another at different sites, and moved within and across national borders. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **R S 327. The History of Religion in America to 1800.**

Same as History 351N. Survey of religious thought, practices, and institutions in the colonies and early republic. Three lecture hours a week for one semester. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing.

### **R S 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Religious Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Religious Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated program. May be repeated for credit when the topics vary.

### **R S 335. Jesus in History and Tradition.**

Same as Classical Civilization 348 (Topic 10: Jesus in History and Tradition). Critical issues, scholarly debates, and historical methods in studying the development of the Christian tradition regarding the figure of Jesus. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **R S 337. Religion and Society.**

Same as Sociology 343. The growth and decline of religious groups and traditions; "cults" and new religions; comparative sociology of religion; the United States religious landscape; religion and individual health and well-being; spirituality and other aspects of social life. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **R S 341. Topics in Religions of South Asia.**

Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Indian Philosophies.** Same as Asian Studies 372 (Topic 2: Indian Philosophies) and Philosophy 348 (Topic 2: Indian Philosophies).

**Topic 2: Diversity of Indian Traditions.** Same as Asian Studies 372 (Topic 19: Diversity of Indian Traditions). Art and architecture of South Asia from 1200 to 1900 CE, within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 3: Gender, Sexuality, and the Family in Indian Religions and Cultures.** Same as Anthropology 324L (Topic 40: Gender, Sexuality, and the Family in Indian Religions and Cultures), Asian Studies 372 (Topic 25: Gender, Sexuality, and the Family in Indian

Religions and Cultures), and Women's and Gender Studies 340 (Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures). A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

**Topic 5: Gandhi and Gandhism.** Same as Asian Studies 361 (Topic 6: Gandhi and Gandhism) and History 350L (Topic 5: Gandhi and Gandhism). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 6: Muslim India before 1750.** Same as Asian Studies 346M and History 346M. History, art and architecture, and religions of India during the period of Muslim rule from the tenth to the eighteenth century. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 7: Formation of Indian Art.** Same as Asian Studies 372 (Topic 18: Formation of Indian Art). The major artistic achievements of South Asia up to 500 CE, within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 8: Buddhist Art.** Same as Asian Studies 372 (Topic 24: Buddhist Art). Three lecture hours a week for one semester. Only one of the following may be counted: Art History 372 (Topic: Buddhist Art), Asian Studies 372 (Topic 24), Religious Studies 341 (Topic 8). Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

**Topic 9: The Taj Mahal and the Diversity of Indian Art.** Three lecture hours a week for one semester. Only one of the following may be counted: Art History 372 (Topic: The Taj Mahal and the Diversity of Indian Art), Asian Studies 372 (Topic: The Taj Mahal and the Diversity of Indian Art), Religious Studies 341 (Topic 9).

**Topic 10: Early Art of India.** Same as Asian Studies 372 (Topic 15: Early Art of India). Artistic achievements of South Asia up to 1000 CE, with a focus on the function and meaning of works of art within the context of Indian culture. Three lecture hours a week for one semester. Prerequisite: For art history and visual art studies majors, Art History 302 and 303; for others, at least one of the following is advisable but not required: Art History 301, 302, 303.

### **R S 341G. Yoga as Philosophy and Practice.**

Three lecture hours a week for one semester. Philosophy 356 (Topic: Yoga as Philosophy and Practice) and Religious Studies 341G (Topic: Yoga as Philosophy and Practice) may not both be counted. Prerequisite: Upper-division standing.

### **R S 342. Topics in Religions of Central Asia.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **R S 344. The Age of Reformation.**

Same as History 343. Examines late medieval religion, the rise of Protestant movements, and the Catholic response in their cultural, political, and social contexts. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **R S 345. Islamic Spain and North Africa to 1492.**

Same as History 375D and Middle Eastern Studies 343 (Topic 4: Islamic Spain and North Africa to 1492). An introduction to the impact of Islam on Spain and North Africa, with emphasis on social, economic, and cultural development. Three lecture hours a week for one semester. Only one of the following may be counted: Ancient History and Classical Civilization 330 (Topic: Islamic Spain and North

Africa to 1492), History 375D, Islamic Studies 373 (Topic: Islamic Spain and North Africa to 1492), Middle Eastern Studies 321K (Topic 4: Islamic Spain and North Africa to 1492), 343 (Topic 4), Religious Studies 345, 363 (Topic: Islamic Spain and North Africa to 1492). Prerequisite: Upper-division standing.

### **R S 346. Topics in the Religions of the United States.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Religion in American Political Thought.** Same as Government 335M (Topic 5: Religion in American Political Thought). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **R S 346C. Religion and Visual Culture in the United States.**

Focuses on artifacts or "visual culture," and considers how religion mediates artifacts and how artifacts mediate religion. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: American Studies 325 (Topic: Religion and Visual Culture in the United States), Religious Studies 346 (Topic: Religion and Visual Culture in the United States), 346C.

### **R S 352. Topics in Religions of East Asia.**

Three lecture hours or two lecture hours and one laboratory/discussion hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Japanese Religion and Society.** Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Japanese Religion and Society), Asian Studies 372 (Topic: Japanese Religion and Society), Religious Studies 352 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Religion and Rebellion in Modern East Asia.** Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 4: Ritual and Religion in Korea.** Same as Asian Studies 340 (Topic 10: Ritual and Religion in Korea). Examination of the major religious traditions of Korea. Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Ritual and Religion in Korea), Asian Studies 340 (Topic 10), Religious Studies 352 (Topic 4). Prerequisite: Upper-division standing.

**Topic 5: Ritual and Religion in Chinese Society.** Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Ritual and Religion in Chinese Society), Asian Studies 361 (Topic: Ritual and Religion in Chinese Society), Religious Studies 352 (Topic 5). Prerequisite: Upper-division standing.

**Topic 6: The Asian Perspective on Death and Dying.** Only one of the following may be counted: Anthropology 324L (Topic: The Asian Perspective on Death and Dying), Asian Studies 361 (Topic: The Asian Perspective on Death and Dying), Religious Studies 352 (Topic 6). Prerequisite: Upper-division standing.

**Topic 7: Religion in Japanese History.** Same as Asian Studies 340 (Topic 9: Religion in Japanese History). Examines religious concepts and practices in wider contexts of modern Japanese culture and society. Focuses on the critical understanding of the

individual and collective aspects of Japanese spiritual life. Three lecture hours a week for one semester.

### **R S 353. Topics in Religion and Culture of the Biblical World.**

Three lecture hours a week for one semester; additional hours may be required by some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **R S 353D. The Dead Sea Scrolls.**

Same as History 364G (Topic 3: The Dead Sea Scrolls), Jewish Studies 364 (Topic 4: The Dead Sea Scrolls), and Middle Eastern Studies 342 (Topic 23: The Dead Sea Scrolls). Three lecture hours a week for one semester. Only one of the following may be counted: History 364G (Topic 3), Jewish Studies 361 (Topic 4: The Dead Sea Scrolls), 364 (Topic 4), Middle Eastern Studies 320 (Topic 13: The Dead Sea Scrolls), 342 (Topic 23), Religious Studies 353D. Prerequisite: Upper-division standing.

### **R S 354D. The Bible and History.**

Same as Jewish Studies 364 (Topic 3: The Bible and History). The critical uses of biblical and extrabiblical data in the reconstruction of the history of the biblical period. Three lecture hours a week for one semester. Only one of the following may be counted: Ancient History and Classical Civilization 330 (Topic: The Bible and History), History 372P, Jewish Studies 364 (Topic 3), Middle Eastern Studies 320 (Topic 3: The Bible and History), Religious Studies 354D. Prerequisite: Upper-division standing.

### **R S 355. The Bible as Literature.**

Same as English 358J. In-depth literary study of the Bible, with emphasis on the formal features of narrative, hymn, prophecy, apocalypse, gospel, and epistle. Three lecture hours a week for one semester. Prerequisite: Comparative Literature 315, English 603B, 316K, or Tutorial Course 603B.

### **R S 355D. Reformation Theology.**

Same as Germanic Civilization 360E (Topic 1: Reformation Theology) and History 362G (Topic 1: Reformation Theology). Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **R S 355K. The Bible in British and American Literature.**

Same as English 358K. The reading of biblical masterpieces as literature; consideration of different versions of the Bible and their influence on English and American literature. Three lecture hours a week for one semester. Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

### **R S 357. Topics in the Religions of Europe.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Heresy and the Inquisition.** Same as History 350L (Topic 33: Heresy and the Inquisition). Prerequisite: Upper-division standing.

**Topic 2: Byzantine Art.** Same as Art History 329J. Examination of early Christian and medieval art and architecture in the eastern Roman empire, including related traditions (Coptic, Armenian, Georgian, Crusader, Norman).

**Topic 4: Midnight Sun People: The Sami.** Same as Germanic Civilization 327E (Topic 12: Midnight Sun People: The Sami) and



Scandinavian 327 (Topic 10: Midnight Sun People: The Sami). Only one of the following may be counted: Anthropology 324L (Topic: Midnight Sun People), English 322 (Topic: Midnight Sun People), Germanic Civilization 327E (Topic 12), Religious Studies 357 (Topic 4), Scandinavian 327 (Topic 10).

### **R S 358. Topics in the Religions of the Middle East.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Medieval Islam: Faith and History.** Same as History 350L (Topic 34: Medieval Islam: Faith and History) and Middle Eastern Studies 343 (Topic 5: Medieval Islam: Faith and History). Only one of the following may be counted: History 350L (Topic 34), Middle Eastern Studies 321K (Topic 7: Medieval Islam: Faith and History), 343 (Topic 5), Religious Studies 358 (Topic 2). Prerequisite: Upper-division standing.

**Topic 4: Sufism and Islamic Mysticism.** Same as Islamic Studies 340 (Topic 4: Sufism and Islamic Mysticism) and Middle Eastern Studies 342 (Topic 24: Sufism and Islamic Mysticism). Muslim debates of Sufism; the historical development of Sufi beliefs regarding theology, religious laws, expression, and popular social practices. Only one of the following may be counted: Asian Studies 340 (Topic: Sufism and Islamic Mysticism), History 364G (Topic: Sufism and Islamic Mysticism), Islamic Studies 340 (Topic 4), 372 (Topic 10: Sufism: Islamic Mysticism and Spirituality), Middle Eastern Studies 320 (Topic 16: Sufism: Islamic Mysticism and Spirituality), 321K (Topic: Sufism and Islamic Mysticism), 342 (Topic 24), Religious Studies 341 (Topic: Sufism and Islamic Mysticism), 358 (Topic 4). Prerequisite: Upper-division standing.

**Topic 5: Veiling in the Muslim World.** Same as Asian Studies 372 (Topic 14: Veiling in the Muslim World), Islamic Studies 372 (Topic 2: Veiling in the Muslim World), and Women's and Gender Studies 340 (Topic 11: Veiling in the Muslim World). Only one of the following may be counted: Asian Studies 372 (Topic 14), Islamic Studies 372 (Topic 2), Middle Eastern Studies 322K (Topic 17: Veiling in the Muslim World), Religious Studies 358 (Topic 5), Women's and Gender Studies 340 (Topic 11). Prerequisite: Upper-division standing.

### **R S 358Q. Supervised Research.**

Individual instruction. Prerequisite: Upper-division standing.

### **R S 360. Topics in Religions of Sub-Saharan Africa.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **R S 362. Independent Research in Religious Studies.**

Faculty-directed research. Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

### **R S 365. Topics in Ancient Religion.**

Three lecture hours a week for one semester; additional hours may be required by some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Rome and Jerusalem.** Same as Ancient History and Classical Civilization 325 (Topic 3: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7: Rome and Jerusalem), and Middle Eastern Studies 342 (Topic 21: Rome and Jerusalem). A study of daily life in Israel during the Roman period, focusing on Jerusalem, ancient Palestinian synagogues and churches, Jewish

and Christian symbolism, agriculture, warfare, and burial practices. Only one of the following may be counted: Ancient History and Classical Civilization 325 (Topic 3), Classical Civilization 348 (Topic: Rome and Jerusalem), History 321G, Jewish Studies 365 (Topic 7), Middle Eastern Studies 320 (Topic 2: Rome and Jerusalem), 342 (Topic 21), Religious Studies 365 (Topic 1), Urban Studies 353 (Topic: Rome and Jerusalem). Prerequisite: Upper-division standing.

**Topic 2: Introduction to Germanic Religion and Myth.** Same as European Studies 347 (Topic 3: Introduction to Germanic Religion and Myth) and Germanic Civilization 340E (Topic 1: Introduction to Germanic Religion and Myth). Only one of the following may be counted: English 322 (Topic 2: Introduction to Germanic Religion and Myth), European Studies 347 (Topic 3), 361 (Topic 6: Introduction to Germanic Religion and Myth), Germanic Civilization 340E (Topic 1), Religious Studies 365 (Topic 2). Prerequisite: Upper-division standing.

### **R S 366. Topics in Religions of the Americas.**

Three lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **R S 368. Topics in Religions of Latin America.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Church and State in Latin America.** Same as History 346W and Latin American Studies 366 (Topic 21: Church and State in Latin America). History of Church-state relations and religious politics in modern Latin America, with emphasis on the nineteenth to early twentieth-century periods. Only one of the following may be counted: History 346W, 363K (Topic Church and State in Latin America), Latin American Studies 366 (Topic 21), Religious Studies 368 (Topic 1). Prerequisite: Upper-division standing.

### **R S 373. Topics in Comparative Religion.**

Three lecture hours a week for one semester. Religious Studies 373 and 375S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **R S 373M. Biomedicine, Ethics, and Culture.**

Same as Asian Studies 361 (Topic 29: Biomedicine, Ethics, and Culture). Three lecture hours a week for one semester. Only one of the following may be counted: Anthropology 324L (Topic: Biomedicine, Ethics, and Culture), Asian Studies 361 (Topic: Biomedicine, Ethics, and Culture), 361 (Topic 29), Religious Studies 373 (Topic: Biomedicine, Ethics, and Culture), 373M. Prerequisite: Upper-division standing.

### **R S 375S. Advanced Seminars in Religious Studies.**

Discussion and research-based study of topics in religious studies. Includes theoretical approaches to the study of religion. Three lecture hours a week for one semester. Religious Studies 373 and 375S may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and at least six semester hours of coursework in religious studies.

**Topic 1: What is Religion?.** Only one of the following may be counted: Religious Studies 373 (Topic: What is Religion?), 373R, 375S (Topic 1).



## Topic 2: Introduction to Comparative Religion.

### R S 679H. Honors Tutorial Course.

Supervised individual reading for one semester, followed by research and writing to produce a substantial paper on a specific topic in religious studies, to be completed during the second semester. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 679HA, upper-division standing and admission to the Religious Studies Honors Program; for 679HB, Religious Studies 679HA.

## Department of Rhetoric and Writing

The Department of Rhetoric and Writing offers the required core course, Rhetoric and Writing 306, as well as lower-division and upper-division courses in rhetoric and writing, and a number of Writing Flag courses. The department also administers the Undergraduate Writing Center, which supports writing instruction in all undergraduate courses and the Digital Writing and Research Lab, which offers innovative approaches to writing in digital environments.

If a student has received either a passing or a failing grade or the symbol Q in Rhetoric and Writing 306, he or she may not earn credit by examination for the course.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Rhetoric and Writing: RHE

### Lower-Division Courses

#### RHE 306 (TCCN: ENGL 1301). Rhetoric and Writing.

An introductory writing course that includes instruction in practical reasoning and the principles of rhetoric. Three lecture hours a week for one semester. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A. Prerequisite: A passing score on the writing section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).

#### RHE 306Q. Rhetoric and Writing for Nonnative Speakers of English.

Enrollment limited to nonnative speakers of English. An introductory writing course that includes instruction in practical reasoning and the principles of rhetoric, as well as grammar and mechanics of standard American English. Five lecture hours a week for one semester. Only one of the following may be counted: English 603A, Rhetoric and Writing 306, 306Q, Tutorial Course 603A. Prerequisite: Students must present their scores on the Test of English as a Foreign Language (TOEFL) to the Rhetoric and Writing Office prior to registering.

#### RHE 309K, 409K. Topics in Writing.

A writing course focused on studying and practicing methods of rhetorical analysis within the contexts of disputed issues of academic, political, or cultural significance. Three or four lecture hours a week for

one semester. May be repeated once for credit when the topics vary. Prerequisite: Rhetoric and Writing 306 or 306Q.

#### RHE 309S. Critical Reading and Persuasive Writing.

A writing course designed to teach advanced rhetorical analysis and advocacy on public issues. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306 or 306Q.

#### RHE 310. Intermediate Expository Writing.

An intensive writing workshop, focusing on style and readability. Three lecture hours a week for one semester. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

#### RHE 312. Writing in Digital Environments.

A writing course focused on using, interpreting, and analyzing traditional and emerging technologies. Taught using networked computers. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306.

#### RHE 315. Introduction to Visual Rhetoric.

A writing course designed to teach students to analyze and produce visual and nonverbal forms of rhetoric. Three lecture hours a week for one semester. Prerequisite: Rhetoric and Writing 306.

#### RHE 317 (TCCN: ENGL 2311). Technical Writing.

Reading and writing in professional and technological environments. Three lecture hours a week for one semester. Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

#### RHE 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Rhetoric and Writing.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Rhetoric and Writing. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### RHE 321. Principles of Rhetoric.

Examines major terms, issues, and approaches in the theory and practice of rhetoric and writing. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

#### RHE 325M. Advanced Writing.

An advanced course designed to improve and refine writing. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

#### RHE 328. Topics in Professional and Technical Writing for Liberal Arts Majors.

For liberal arts majors only. A professional and technical writing course exploring topics such as writing for nonprofit organizations, writing for government, and writing for industry. Designed for students in nontechnical fields. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

**Topic 1: Magazine Writing and Publishing.** Introduction to magazine writing, editing, and publishing, with an emphasis on the nonfiction article.

**Topic 2: Writing for Nonprofits.** Studies the writing genres and rhetorical strategies that are routinely used in nonprofit organizations. Covers business reports, grant writing, and feature writing.

**Topic 3: Principles of Technical Writing.** Writing practical documents that help readers follow procedures, make informed choices, and understand complex information.

### **RHE 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Rhetoric and Writing.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Rhetoric and Writing. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **RHE 330C. Advanced Studies in Digital Rhetoric.**

An advanced course that examines the role of information technologies in communication. Taught using networked computers. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

**Topic 1: Rhetorics of Cyberculture.** Examines the ways cyberspace is represented, critiqued, and employed in writing and film. Explores the social, ethical, and political implications of networked culture.

**Topic 2: Designing Text Ecologies.** Explores the function and interaction of texts in the workplace. Emphasis on research, analysis, and design of the strategic, tactical, and operational aspects of texts.

### **RHE 330D. History of Rhetoric.**

An advanced survey of figures and movements in the history of rhetoric, from classical to contemporary. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

**Topic 1: Sophistry and the Invention of Rhetoric.** Examines the role of sophists and sophistry in the development and practice of rhetoric as an art, from antiquity to modern times.

**Topic 2: Kairos and the Rhetorical Situation.** Introduction to kairos, a key concept in rhetorical theory from ancient to modern times, that focuses attention on making a text appropriate for its historical situation. Explores why some writing succeeds at attracting attention and inspiring action, while some writing fails.

**Topic 3: Deliberating War.** Studies the recurrent means of making arguments for and against war, and the role of rhetoric in public deliberation. Rhetoric and Writing 330D (Topic: Pro- and Anti-War Rhetoric) and 330D (Topic 3) may not both be counted.

**Topic 4: Rhetoric and Racism.** Explores theories of rhetoric by examining arguments about group identity, from Athenian discussions of "barbarism" in the fourth century BC to nineteenth-century arguments about citizenship.

**Topic 5: History of Public Argument.** A survey of the practice and theory of argumentation, with particular attention to its civic and political uses and implications.

**Topic 6: Classical to Modern Rhetoric.** Surveys the works of major rhetorical theorists and practitioners in the Western tradition from the ancient Greeks to the present.

### **RHE 330E. Rhetorical Theory and Analysis.**

An advanced examination of rhetorical theories and their applications. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

**Topic 1: Rhetoric of Science in Popular Media.** Rhetorical analysis of scientific discourse and how it is represented in popular media, including news reports, magazines, and popular nonfiction.

**Topic 2: Demagoguery.** Examines material produced by rhetors commonly considered demagogues and assesses the scholarly discussions of these individuals.

**Topic 3: Democracy and the Media.** Rhetorical analysis, with particular attention to the effects of technologies and journalistic institutions on public deliberation.

### **RHE 360M. Rhetoric and Writing for Teachers of English.**

Designed for students seeking a secondary school teaching certificate or those in the UTeach-Liberal Arts program. An advanced course that examines theories of writing and writing pedagogy. Three lecture hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

### **RHE 366. Internship in Rhetoric and Writing.**

Research and staff experience working in an appropriate nonprofit, public-, or private-sector entity. Ten to twelve hours a week for one semester. May be repeated once for credit when the internships vary. Offered on the pass/fail basis only. Prerequisite: Upper-division standing, twelve semester hours of coursework in rhetoric and writing, and consent of instructor.

### **RHE 367R. Conference Course in Rhetoric and Writing.**

Supervised work on specific projects in rhetoric and writing. Three conference hours a week for one semester. May be repeated for credit. Prerequisite: Completion of at least thirty-six semester hours of coursework; English 316K; and approval of written application by the supervising instructor.

### **RHE 368C. Writing Center Internship.**

Intensive reading, writing, and discussion in writing center theory and philosophy, tutoring methods, and writing pedagogy, as well as a review of standard American English usage and mechanics; followed by a supervised apprenticeship as a peer consultant in the Undergraduate Writing Center. Two lecture hours and two apprenticeship hours a week for one semester. Prerequisite: Completion of at least thirty semester hours of coursework; English 316K; and approval of written application by instructor.

### **RHE 368E. Editing for Publication.**

Advanced instruction in revising and editing for publication. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

**Topic 1: The Book: Prospectus to Proofs.** Designed to make students better writers and more careful editors, the course includes creation of a simulated book from proposal stage to editing of final page proofs.

### **RHE 375. Capstone Seminars in Rhetoric.**

Allows the student to integrate the knowledge gained in rhetoric and writing through a major independent project. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, and Rhetoric and Writing 321, 330C, 330D, and 330E.

### **RHE 379C. Advanced Topics in Rhetoric and Writing.**

An advanced course focused on specific theories or practices of rhetoric and writing. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Completion of at least thirty semester hours of coursework, and English 316K.

## **Department of Air Force Science**

The Air Force Reserve Officer Training Corps (AFROTC) was activated at the University of Texas in September, 1947. The program is designed to commission career-oriented officers who meet specific Air Force requirements. The AFROTC objective is to place on active duty lieutenants who demonstrate dedication to their assignments, willing acceptance of responsibility, critical and creative thinking, and the ability to speak and write effectively.

AFROTC courses are taught by Air Force officers and are approved for college credit toward the cadet's degree program in amounts determined by the college concerned.

AFROTC scholarships are available to selected cadets. Scholarships are awarded on the basis of overall merit, with particular attention paid to academic achievement. Recipients must maintain academic standards in order to retain the scholarships. Other scholarships are also available for upper-division cadets. Additional information is available from the chair of the department.

Extracurricular activities available through AFROTC include; intramural athletics, parades, ceremonies, formal military functions, field trips to Air Force installations, and membership in national military societies.

Air force science courses are designed to prepare selected students for a commission in the United States Air Force through the AFROTC program. Students who do not hold AFROTC scholarships may take lower-division courses with no military obligation. Scholarship students and selected students who elect to take upper-division courses are on contract. Upon graduation and commissioning he/she will enter active duty in the United States Air Force.

## **Air Force Science: AFS**

### **Lower-Division Courses**

#### **AFS 100. Leadership Laboratory.**

Various leadership techniques, including drill and ceremonies, customs and courtesies, and uniform standards. Two laboratory hours a week for one semester. Offered on the pass/fail basis only.

#### **AFS 102K. The Foundations of the United States Air Force I.**

Introductory course exploring the overall roles and missions of the United States Air Force and career fields available in the Air Force. Emphasis on military customs and courtesies, appearance standards, Air Force core values, and written communication. One lecture hour a

week for one semester. Offered in the fall semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.

#### **AFS 102L. The Foundations of the United States Air Force II.**

Continuation of Air Force Science 102K, with an introduction to American military history and emphasis on personal communication. One lecture hour a week for one semester. Offered in the spring semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.

#### **AFS 111K. The Evolution of USAF Air and Space Power I.**

Key historical events and milestones in the development of air power as a primary instrument of United States national security. One lecture hour a week for one semester. Offered in the fall semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.

#### **AFS 111L. The Evolution of USAF Air and Space Power II.**

Continuation of Air Force Science 111K. One lecture hour a week for one semester. Offered in the spring semester only. Prerequisite: Concurrent enrollment in Air Force Science 100.

### **Upper-Division Courses**

#### **AFS 120L. Leadership Laboratory.**

Leadership laboratory course for upper-division students. Further development of leadership skills through leadership positions within the cadet corps. Includes training of freshman and sophomore students as well as a practicum in Air Force unit operation. Two laboratory hours a week for one semester. Offered on the pass/fail basis only.

#### **AFS 321. Air Force Leadership Studies I.**

Study of leadership, management fundamentals, professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Air Force Science 102K, 102L, 111K, and 111L; concurrent enrollment in Air Force Science 120L; and a four- or five-week field training course or equivalent ROTC or military training.

#### **AFS 322. Air Force Leadership Studies II.**

Continuation of Air Force Science 321. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Air Force Science 321 and concurrent enrollment in Air Force Science 120L.

#### **AFS 331. National Security Affairs.**

Evolution of the role of national security in a democratic society, with emphasis on policy formulation, competing values, and organizations. Area studies and the impact of developing nations on United States national security. Three lecture hours a week for one semester. Offered in the fall semester only. Prerequisite: Air Force Science 322 and concurrent enrollment in Air Force Science 120L.

#### **AFS 332. Current Issues and Preparation for Active Duty.**

Acculturation to active duty. Includes study of the evolution and jurisdiction of military law, officership, and current Air Force issues. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Air Force Science 331, and concurrent

enrollment in Air Force Science 120L or consent of the department chair.

## Department of Military Science

The Army Reserve Officers' Training Corps (ROTC) was established at the University of Texas in September, 1947. As a senior division unit, it is designed to provide a course of military instruction that will permit qualified students to prepare themselves for commissions as second lieutenants while they pursue other academic courses leading to baccalaureate or advanced degrees from the University.

Upon being commissioned a second lieutenant, each student has the opportunity to serve in the active Army, Army Reserve, or National Guard.

The Army ROTC program, in addition to providing a basic foundation in military subjects, is designed to develop the highest qualities of leadership, character, and citizenship through the wide variety of extracurricular activities it sponsors. Such activities include parades, ceremonies, social events, a Ranger detachment, and intramural athletic teams.

The Army ROTC program is normally a four-year program divided into a basic course and an advanced course. The basic course is conducted during the first two years and the advanced course during the last two years. Certain students may qualify for advanced placement in the program based on previous military training in Junior ROTC, a service academy, active duty in a military service, credit for other college courses, or completion of a special four-week summer camp, normally between the sophomore and junior year.

The Department of the Army has determined that a need exists for all Army ROTC cadets to have a demonstrated proficiency in selected disciplines. These courses are called Professional Military Education (PME) and must be completed prior to graduation. A list of courses that fulfill PME requirements is available from the chair of the Department of Military Science.

Two-, three-, and four-year scholarship programs are offered to selected cadets. The four-year scholarship program is administered by the Department of the Army, but selection is based on the Professor of Military Science Order of Merit List (OML). Applicants must apply while in high school. The remaining programs are administered directly through the Department of Military Science.

Scholarship students receive \$300 to \$500 a month for up to ten months for each year of their scholarship. The scholarship pays for required tuition and mandatory fees, laboratory expenses, and books. Nonscholarship students receive \$450 to \$500 a month during the advanced course. For additional information, contact the scholarship and enrollment officer at [arotc@uts.cc.utexas.edu](mailto:arotc@uts.cc.utexas.edu) or <http://www.utexas.edu/cola/depts/arotc>.

## Military Science: M S

### Lower-Division Courses

#### M S 000. Leadership Laboratory.

Open only to students in associated military science courses. Leadership responsibilities for planning, coordination, execution, and evaluation of training and other activities. Self-confidence and team-building leadership skills that can be applied throughout life. One and one-half laboratory hours a week for one semester. Required of

all military science students. Prerequisite: Concurrent enrollment in another military science course.

#### M S 101. Basic Military Science I-A.

Designed to increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations, and basic marksmanship. Fundamental concepts of leadership in a profession. One one-hour lecture/practice session a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.

#### M S 103. Basic Military Science I-B.

Principles of effective leading. Designed to reinforce self-confidence through participation in physically and mentally challenging exercises with upper-division ROTC students. Communication skills that improve individual performance and group interaction. Relationship of organizational ethical values to the effectiveness of a leader. One one-hour lecture/practice session a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.

#### M S 210. Basic Military Science II-A.

Ethics-based leadership skills designed to develop individual abilities and contribute to effective team-building. Focus on oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Fundamentals of ROTC's Leadership Assessment Program. Two lecture/practice hours a week for one semester, and a weekend field training exercise. Prerequisite: Concurrent enrollment in Military Science 000.

#### M S 212. Basic Military Science II-B.

Introduction to individual and team aspects of military tactics in small-unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security, and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Techniques for training others as an aspect of continued leadership development. Two lecture/practice hours a week for one semester, and a weekend field training exercise. Prerequisite: Concurrent enrollment in Military Science 000.

## Upper-Division Courses

#### M S 320. Advanced Military Science III-A.

Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Use of small-unit defensive tactics and opportunities to plan and conduct training for lower-division students. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.

#### M S 320K. Advanced Military Science III-B.

Continued study of methods covered in Military Science 320. Students analyze tasks; prepare written or oral guidance for team members to accomplish tasks; delegate tasks and supervise; plan for and adapt to the unexpected in organizations under stress; examine and apply lessons from leadership case studies; examine the importance of ethical decision making in enhancing team performance. Three lecture/practice hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.



### **M S 375. Leadership and Ethics (IV-A).**

Military leadership and professional ethics; post and installation support system; introduction to the military justice system. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.

### **M S 375K. Transition to Lieutenant (IV-B).**

Fundamentals of the military justice system; training and logistical management systems; military social functions; role of the second lieutenant. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000 and approval of departmental representative.

### **M S 379. Advanced Military Science V-A.**

Advanced study and research on historic and contemporary military subjects and events. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.

### **M S 379K. Advanced Military Science V-B.**

Advanced study and research on historic and contemporary military subjects and events. Three lecture hours a week for one semester. Prerequisite: Concurrent enrollment in Military Science 000.

## **Department of Naval Science**

The Naval Reserve Officers Training Corps (NROTC) was established at the University of Texas in September, 1940, to offer the naval science courses necessary to qualify University students for commissions in the United States Navy or Marine Corps.

Qualified students may apply for the four-year or two-year Navy-Marine Scholarship Program or college program (nonscholarship) and earn a commission in the Navy or Marine Corps.

NROTC scholarship students are appointed midshipmen, United States Naval Reserve, by the Secretary of the Navy, and granted the compensation and benefits authorized by law. While students attend the University, the Navy pays tuition, the cost of textbooks, fees of an instructional nature, and a subsistence allowance of \$250 to \$450 a month during the academic year. During drill periods and summer training periods, midshipmen wear government-furnished uniforms. Students should submit scholarship applications to a naval recruiting station before December 1 of each year or to the Department of Naval Science after the first semester of enrollment in the college program. Additional information is available from the chair of the department.

### **Naval Science: N S**

#### **Lower-Division Courses**

##### **N S 000. Drill.**

Three laboratory hours a week for one semester.

##### **N S 302. Introduction to Naval Science.**

A general introduction to sea power and the naval service, including the mission, organization, regulations, warfare components, and personnel programs. Three lecture hours a week for one semester.

### **N S 603. Naval Ships Systems I and II.**

Introduction to types, structures, and purposes of naval ships and weapons systems. Three lecture hours a week for two semesters.

### **N S 312. Sea Power and Maritime Affairs.**

A consideration of the influence of sea power, naval history, and maritime affairs on current events and national policy. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.

## **Upper-Division Courses**

### **N S 326. Evolution of Warfare.**

Explores the forms of warfare employed by great leaders in history as they relate to the evolution of warfare. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.

### **N S 329. Navigation and Naval Operations I.**

An introduction to piloting, a survey of navigational aids, and a study of the Rules of the Nautical Road. Three lecture hours a week for one semester.

### **N S 330. Leadership and Ethics.**

Principles of leadership and ethics reinforced through seminar discussion and case studies. Discussion of the duties and responsibilities of a naval officer. Three lecture hours a week for one semester. Prerequisite: Naval Science 335 and consent of instructor.

### **N S 335. Leadership and Management.**

Study of leadership and management theory in organizations, with emphasis on examining the leadership process in the context of the dynamic interaction of the leader, the followers, and the situation. Three lecture hours a week for one semester. Prerequisite: Consent of instructor.

### **N S 362. Amphibious Warfare.**

Defines the concept of amphibious warfare, explores its doctrinal origins, and traces its evolution as an element of naval policy during the twentieth century. Three lecture hours a week for one semester.

### **N S 369. Navigation and Naval Operations II.**

Study of the celestial sphere and nautical astronomy to determine positions on the earth by mathematical analysis, and an introduction to relative motion and the maneuvering board. Three lecture hours a week for one semester.

## **Center for Russian, East European, and Eurasian Studies**

### **Russian, East European, and Eurasian Studies: REE**

#### **Lower-Division Courses**

##### **REE 301. Introduction to Russian, East European, and Eurasian Studies.**

An introduction to the former Soviet Union and Eastern Europe through each of the major disciplines represented in the program: language, literature, anthropology, geography, history, government, sociology, and economics. Three lecture hours a week for one semester. History 306N (Topic 4: Introduction to Russian, East European, and Eurasian

Studies: History) and Russian, East European, and Eurasian Studies 301 may not both be counted. Government 314 (Topic 4: Introduction to Russian, East European, and Eurasian Studies: Political Science) and Russian, East European, and Eurasian Studies 301 may not both be counted.

### **REE 302. Topics in Russian, East European, and Eurasian Studies.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The Vampire in Slavic Cultures.** Same as Slavic 301 (Topic 1: Vampire in Slavic Cultures). Examines the vampire in the cultures of Russia and Eastern Europe, including manifestations in literature, religion, art, film, and common practices from its origins to present. Only one of the following may be counted: Comparative Literature 305 (Topic: Vampire in Slavic Cultures), European Studies 307 (Topic: Vampire in Slavic Cultures), Russian, East European, and Eurasian Studies 302 (Topic: The Vampire in Slavic Cultures), 302 (Topic 1), Slavic 301 (Topic: The Vampire in Slavic Cultures), 301 (Topic 1).

### **REE 318Q. Supervised Research.**

Individual instruction.

### **REE 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Russian, East European, and Eurasian Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Russian, East European, and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **REE 320. Introduction to an East European Language.**

An overview of the structure and vocabulary of an East European language necessary for a reading knowledge of the language. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any degree. May be repeated for credit when the topics vary.

### **REE 325. Topics in Language, Literature, and Culture.**

Three lecture hours a week for one semester. Fulfills the basic Russian, East European, and Eurasian studies requirement in language, literature, and culture. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Gypsy Language and Culture.** Linguistic introduction to Romani; relationship to languages of India; history from 280 BC; modern dialects and international standard language; history and culture as reflected in the language. Only one of the following may be counted: Asian Studies 372 (Topic 13: Gypsy Language and Culture); Linguistics 322; Russian, East European, and Eurasian Studies 325 (Topic 1).

**Topic 9: The Russian Novel.** Same as English 322 (Topic 37: The Russian Novel) and Russian 356 (Topic 1: The Russian Novel). Only one of the following may be counted: English 322 (Topic 37),

European Studies 361 (Topic: The Russian Novel), Russian 356 (Topic 1), Russian, East European, and Eurasian Studies 325 (Topic 9). Prerequisite: Upper-division standing.

**Topic 10: The Major Works of Dostoevsky.** Russian 360 (Topic 1: The Major Works of Dostoevsky). Explores the dilemmas of homicide, suicide, patricide, and redemption in the novels of Fyodor Dostoevsky. Only one of the following may be counted: Core Texts and Ideas 345 (Topic: Major Works of Dostoevsky), Russian 360 (Topic: Major Works of Dostoevsky), 360 (Topic 1), Russian, East European and Eurasian Studies 325 (Topic: Major Works of Dostoevsky), 325 (Topic 10). Prerequisite: Upper-division standing.

**Topic 11: Contemporary Russian Cinema.** Same as Russian 330 (Topic 4: Contemporary Russian Cinema). Uses contemporary Russian film both as a means of exploring the confusion that resulted from the demise of the Soviet Union in 1991 and the search for a new sense of identity in Russia throughout the 1990s and early 2000s. Only one of the following may be counted: Russian 330 (Topic: Contemporary Russian Cinema), 330 (Topic 4), Russian, East European, and Eurasian Studies 325 (Topic 11). Prerequisite: Upper-division standing.

**Topic 12: The Apocalypse in Russian Literature and Culture.** Russian 330 (Topic 5: The Apocalypse in Russian Literature and Culture). Explores and analyzes apocalyptic consciousness in Russian literature and culture from the Middle Ages to the present. Emphasis will be on such themes as the expectation of the end of the world, identification of the Antichrist, messianic prophecy, and visions of an afterlife. Only one of the following may be counted: Russian 330 (Topic: The Apocalypse in Russian Literature and Culture), 330 (Topic 5), Russian, East European and Eurasian Studies 325 (Topic: The Apocalypse in Russian Literature and Culture), 325 (Topic 12). Prerequisite: Upper-division standing.

**Topic 13: Introduction to Old Russian Literature and Culture.** Same as Russian 330 (Topic 6: Introduction to Old Russian Literature and Culture). Medieval and early modern Russian literature and culture, including literary texts from Kievan and Muscovite Rus. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: The Icon and the Sword: An Introduction to Old Russian Literature and Culture), 325 (Topic 13), Russian 330 (Topic: The Icon and the Sword: An Introduction to Old Russian Literature and Culture), 330 (Topic 6). Prerequisite: Upper-division standing.

**Topic 14: Twentieth-Century Russian Culture.** Same as Russian 330 (Topic 7: Twentieth-Century Russian Culture). Survey of the political, social, and cultural history of Russia during the Soviet period, from the revolutionary events of 1917 until the dissolution of the Soviet government and political system in December 1991. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Twentieth-Century Russian Culture), 325 (Topic 14), Russian 330 (Topic: Twentieth-Century Russian Culture), 330 (Topic 7). Prerequisite: Upper-division standing.

**Topic 15: Slavs in the Western Imagination.** Slavic 324 (Topic 4: Slavs in the Western Imagination). Examines representations of Eastern, Western, and Southern Slavs in Western Europe and North America. Only one of the following may be counted: Russian, East European, and Eurasian Studies, 325 (Topic: Slavs in the Western Imagination), 325 (Topic 15), Slavic 324 (Topic: Slavs in the Western Imagination), 324 (Topic 4). Prerequisite: Upper-division standing.

**Topic 16: The Major Works of Tolstoy.** Same as Russian 360 (Topic 2: The Major Works of Tolstoy). Explores Russian writer Lev Nikolaevich Tolstoy, particularly his progression from idealizing family life and the Russian state to renouncing sexual love and national allegiances. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: The

Major Works of Tolstoy), 325 (Topic 16), Russian 360 (Topic: Majors Works of Tolstoy), 360 (Topic 2). Prerequisite: Upper-division standing.

**Topic 17: Political Terror in Russian Literature.** Same as Russian 356 (Topic 2: Political Terror in Russian Literature). Explores works dealing with political terror and oppression by Dostoevsky, Bely, Babel, Akhmatova, and Solzhenitsyn. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Terror in Russia: Method, Madness, Murder), 325 (Topic 17), Russian 356 (Topic: Terror in Russia: Method, Madness, Murder), 356 (Topic 2). Prerequisite: Upper-division standing.

**Topic 18: War and Revolution in Russian Literature and Culture.** Same as Russian 356 (Topic 3: War and Revolution) in Russian Literature and Culture). Examines Russian narratives of war and revolution as represented in fiction, cinema, and journalism. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: War and Peace in Russian Literature and Culture), 325 (Topic 18), Russian 356 (Topic: War and Peace in Russian Literature and Culture), 356 (Topic 3). Prerequisite: Upper-division standing.

**Topic 19: Russian Youth Culture, Late Soviet to Present.** Same as Russian 330 (Topic 8: Russian Youth Culture, Late Soviet to Present). Examines the history and cultural products (films, music, writings) of Russia's youth, and their impact on contemporary society and politics. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Russian Youth Culture, Gorbachev to Present), 325 (Topic 19), Russian 330 (Topic: Russian Youth Culture, Gorbachev to Present), 330 (Topic 8). Prerequisite: Upper-division standing.

**Topic 20: Historical Survey of Russian Music.** Same as Russian 330 (Topic 3: Historical Survey of Russian Music). Focus on the role of Russian Music in its social and historical context. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Historical Survey of Russian Music), 325 (Topic 20), Russian 330 (Topic: Historical Survey of Russian Music), 330 (Topic 3). Prerequisite: Upper-division standing.

### **REE 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Russian, East European, and Eurasian Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Russian, East European, and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **REE 335. Topics in History, Economics, and Government.**

Three lecture hours a week for one semester. Fulfills the basic Russian, East European, and Eurasian studies requirement in history, economics, and government. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Marxist Economics.** An introduction to the Marxian economic theory of capitalism through the study of Karl Marx's *Capital*, volume I, and of its contemporary relevance. Economics 357K and Russian, East European, and Eurasian Studies 335 (Topic 1) may not both be counted. Prerequisite: Upper-division standing, and Economics 304K and 304L with a grade of at least C in each; or consent of instructor.

### **Topic 2: Governments and Politics of Eastern Europe.**

Same as Government 324J and European Studies 348 (Topic 1: Governments and Politics of Eastern Europe). Only one of the following may be counted: European Studies 348 (Topic 1), 361 (Topic 14: Governments and Politics of Eastern Europe), Government 324J, Russian, East European, and Eurasian Studies 335 (Topic 2). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 3: Governments and Politics of Russia.** Issues of nationalism and state-building facing Russia and its neighbors. Evaluation of the post-Soviet experience from the perspectives of both domestic and foreign policy. Government 336M and Russian, East European, and Eurasian Studies 335 (Topic 3) may not both be counted. Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 5: History of Russia to 1917.** Same as History 343L. Survey of Russian history from seventeenth-century Muscovy to the fall of the Romanovs in 1917. Prerequisite: Upper-division standing.

**Topic 6: History of Russia since 1917.** Same as History 343M. A survey of Russian history from the revolution of 1917 to the collapse of the Soviet Union. Prerequisite: Upper-division standing.

**Topic 10: The Military in Politics.** Only one of the following may be counted: Government 365N (Topic 3: The Military in Politics); Latin American Studies 337M (Topic 9: The Military in Politics); Russian, East European, and Eurasian Studies 335 (Topic 10). Prerequisite: Six semester hours of lower-division coursework in government.

**Topic 11: Germany in the Twentieth Century.** Same as History 337N. Survey of German political and military institutions, economic development, culture, and society. Prerequisite: Upper-division standing.

**Topic 12: Stalinist Russia.** Same as History 350L (Topic 41: Stalinist Russia). Prerequisite: Upper-division standing.

**Topic 13: Russian Economic Development since 1917.** The growth of the planned economy in industry, agriculture, and labor. Economics 346K and Russian, East European, and Eurasian Studies 335 (Topic 13) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C in each, and six additional semester hours of coursework in social science; or consent of instructor.

**Topic 14: Political Economy of International Crises.** Examines several dimensions of the ongoing crises in the world economic order and the interrelationships among them. Problem areas covered are neoliberalism, international money, debt, famine, immigration, and energy shocks. Economics 357L and Russian, East European, and Eurasian Studies 335 (Topic 14) may not both be counted. Prerequisite: Economics 304K and 304L with a grade of at least C in each, and six additional semester hours of coursework in social science.

**Topic 15: Understanding the Cold War.** Same as Government 360N (Topic 4: Understanding the Cold War). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

### **REE 345. Topics in Sociology, Geography, and Anthropology.**

Three lecture hours a week for one semester. Fulfills the basic Russian, East European, and Eurasian studies requirement in sociology, geography, and anthropology. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Regions and Cultures of Europe.** Spatial patterns in Europe, with emphasis on cultural, historical, and political



geography. Only one of the following may be counted: Geography 326; 385 (Topic: Regions and Cultures of Europe); Russian, East European, and Eurasian Studies 345 (Topic 2). Prerequisite: Upper-division standing.

**Topic 4: Geography of the Former Soviet Union.** Same as Geography 327. A systematic introduction to cultural, physical, political, and economic geography of the former Soviet Union. Focus on the fundamental transformation that the former Socialist Union Republics, now sovereign states, have undergone since 1991. Prerequisite: Upper-division standing.

**Topic 5: Chechnya: the Politics, Power, and People.** Same as Slavic 324 (Topic 3: Chechnya: the Politics, Power, and the People). Considers the history, culture, religions and recent upheaval of the region of the northern Caucasus called Chechnya. Only one of the following may be counted: Russian, East European, and Eurasian Studies 345 (Topic: Chechnya: the Politics, Power, and the People), 345 (Topic 5: Chechnya: the Politics, Power, and the People), Slavic 324 (Topic: Chechnya: the Politics, Power, and the People), 324 (Topic 3). Prerequisite: Upper-division standing.

**Topic 6: Northern Lands and Cultures.** Develops geographical understanding of the Circumpolar region of the North, an ancient human habitat, home to distinct, millennia old, civilizations. Only one of the following may be counted: European Studies 346 (Topic: Northern Lands and Cultures), Geography 356T (Topic: Northern Lands and Cultures), Russian, East European, and Eurasian Studies 345 (Topic 6). Prerequisite: Upper-division standing.

#### **REE 358Q. Supervised Research.**

Individual instruction. Prerequisite: Upper-division standing.

#### **REE 379C. Conference Course.**

Conference course. May be repeated for credit. Prerequisite: Consent of the undergraduate adviser in Russian, East European, and Eurasian studies.

#### **REE 679H. Honors Tutorial Course.**

Intensive reading and research planned with and approved by the honors adviser, followed by completion of a thesis. Conference course for two semesters. Required of Russian, East European, and Eurasian studies majors who plan to seek special honors in Russian, East European, and Eurasian studies. Prerequisite: For 679HA, upper-division standing, admission to the Russian, East European, and Eurasian Studies Honors Program, and consent of the honors adviser; for 679HB, Russian, East European, and Eurasian Studies 679HA.

## **Department of Slavic and Eurasian Studies**

Before enrolling for the first time in any language offered by the Department of Slavic and Eurasian Studies, all students with any knowledge of the language, however acquired, must take a placement test to determine the course for which they should register. Information on placement tests for Polish and Russian is available from the Center for Teaching and Learning, 2616 Wichita (471-3032). Information about testing in other languages is available from the Department of Slavic and Eurasian Studies office, Calhoun Hall 415 (471-3607).

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University

courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Czech: CZ**

### **Lower-Division Courses**

#### **CZ 601C. Intensive Czech I.**

Not open to native or heritage speakers of Czech. Emphasis on developing oral proficiency in Czech using intensive methods of instruction. Six lecture hours a week for one semester. Czech 601C and 506 may not both be counted. Czech 601C and 507 may not both be counted.

#### **CZ 301K. Introduction to Czech Civilization.**

Introduction to selected topics in the culture of the Czech and Slavic people. Conducted in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary.

#### **CZ 506 (TCCN: CZEC 1511). First-Year Czech I.**

Emphasis on four-skills proficiency: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Czech 601C and 506 may not both be counted.

#### **CZ 507 (TCCN: CZEC 1512). First-Year Czech II.**

Emphasis on four-skills proficiency: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Czech 601C and 507 may not both be counted. Prerequisite: Czech 506.

#### **CZ 611C. Intensive Czech II.**

Not open to native or heritage speakers of Czech. Continuing intensive development of proficiency in Czech, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Czech 611C and 312K, 412K may not both be counted. Czech 611C and 312L, 412L may not both be counted. Prerequisite: Czech 601C or 507.

#### **CZ 312K, 412K. Second-Year Czech I.**

Listening, speaking, reading, and writing at the second-year level. For each semester hour of credit earned, one lecture hour a week for one semester. Czech 611C and 312K, 412K may not both be counted. Prerequisite: Czech 601C or 507.

#### **CZ 312L, 412L. Second-Year Czech II.**

Listening, speaking, reading, and writing at the advanced, second-year level. For each semester hour of credit earned, one lecture hour a week for one semester. Czech 611C and 312L, 412L may not both be counted. Prerequisite: Czech 312K or 412K.

#### **CZ 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Czech.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.



## Upper-Division Courses

### CZ 324. Topics in Czech Studies.

Study of a selected aspect or aspects of Czech culture: literature, theatre, film, visual arts, folklore. Readings and lectures in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 2: Twentieth-Century Czech Fiction.** A survey of twentieth-century Czech prose fiction.

### CZ 325. Third-Year Czech I.

Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Czech 611C or 312L.

### CZ 326. Third-Year Czech II.

Continuation of Czech 325: Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Czech 325.

### CZ 328. Topics in Advanced Czech.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Czech 312L or 412L. Additional prerequisites may vary with the topic and are given in the Course Schedule.

### CZ 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Czech.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### CZ 330. Modern Czech Literature.

A study of Czech literature from the 1860s to the present. The course is conducted in English; Czech majors are required to complete additional coursework in Czech. Three lecture hours a week for one semester. Czech 330 and Russian, East European, and Eurasian Studies 325 (Topic: Modern Czech Literature) may not both be counted. Prerequisite: Upper-division standing or consent of instructor.

### CZ 379. Conference Course in Czech Language or Literature.

Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Czech, or upper-division standing and consent of instructor.

### CZ 679H. Honors Tutorial Course.

Supervised individual research on a literary honors paper of some length. Conference course for two semesters. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing, a University grade point average of at least 3.00, and a grade point average in Czech of at least 3.50; for 679HB, Czech 679HA.

## Polish: POL

### Lower-Division Courses

#### POL 601C. Intensive Polish I.

Not open to native or heritage speakers of Polish. Emphasis on developing oral proficiency in Polish using intensive methods of instruction. Six lecture hours a week for one semester. Polish 601C and 506 may not both be counted. Polish 601C and 507 may not both be counted.

#### POL 506. First-Year Polish I.

Emphasis on four-skills proficiency. Five lecture hours a week for one semester. Polish 601C and 506 may not both be counted.

#### POL 507. First-Year Polish II.

Emphasis on four-skills proficiency. Five lecture hours a week for one semester. Polish 601C and 507 may not both be counted. Prerequisite: Polish 506.

#### POL 611C. Intensive Polish II.

Not open to native or heritage speakers of Polish. Continuing intensive development of proficiency in Polish, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Polish 611C and 312K may not both be counted. Polish 611C and 312L may not both be counted. Prerequisite: Polish 601C or 507.

#### POL 312K. Second-Year Polish I.

Emphasis on four-skills proficiency. Three lecture hours a week for one semester. Polish 611C and 312K may not both be counted. Prerequisite: Polish 601C or 507.

#### POL 312L. Second-Year Polish II.

Emphasis on four-skills proficiency. Three lecture hours a week for one semester. Polish 611C and 312L may not both be counted. Prerequisite: Polish 312K.

## Upper-Division Courses

### POL 321. Introduction to the Polish Language I.

Designed to give students a rapid introduction to fundamentals of the language. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree.

### POL 322. Introduction to the Polish Language II.

Continuation of Polish 321. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. Prerequisite: Polish 321 or consent of instructor.

### POL 324. Topics in Polish Studies.

Selected aspects of Polish history or culture. Readings and lectures in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### POL 325. Third-Year Polish I.

Oral expression, reading, and composition. Three lecture hours a week for one semester. Polish 325 and Russian, East European, and

Eurasian Studies 325 (Topic: Third-Year Polish I) may not both be counted. Prerequisite: Polish 611C or 312L.

### **POL 326. Third-Year Polish II.**

Continuation of Polish 325: Oral expression, reading, and composition. Three lecture hours a week for one semester. Polish 326 and Russian, East European, and Eurasian Studies 325 (Topic: Third-Year Polish II) may not both be counted. Prerequisite: Polish 325.

### **POL 379. Conference Course in Polish Language or Literature.**

Conference course. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Polish or consent of instructor.

## **Russian: RUS**

### **Lower-Division Courses**

#### **RUS 601C. Intensive Russian I.**

Not open to native or heritage speakers of Russian. Emphasis on developing oral proficiency in Russian using intensive methods of instruction. Six lecture hours a week for one semester. May not be counted by students with credit for Russian 804, 506, 506T, 507, or 507T.

#### **RUS 506 (TCCN: RUSS 1511). First-Year Russian I.**

Emphasis on four-skills proficiency: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Russian 601C and 506 may not both be counted.

#### **RUS 507 (TCCN: RUSS 1512). First-Year Russian II.**

Emphasis on four-skills proficiency: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Russian 601C and 507 may not both be counted. Prerequisite: Russian 506.

#### **RUS 611C. Intensive Russian II.**

Not open to native or heritage speakers of Russian. Continuing intensive development of proficiency in Russian, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Only one of the following may be counted: Russian 611C, 612, 312K, 412K, 312M, 515S. Only one of the following may be counted: Russian 611C, 612, 312L, 412L. Prerequisite: Russian 601C, 804, 507, or 507T.

#### **RUS 412K. Second-Year Russian I.**

Listening, speaking, reading, and writing at the second-year level. Four lecture hours a week for one semester. Russian 611C and 412K may not both be counted. Prerequisite: Russian 601C or 507.

#### **RUS 412L. Second-Year Russian II.**

Listening, speaking, reading, and writing at the advanced, second-year level. Four lecture hours a week for one semester. Russian 611C and 412L may not both be counted. Prerequisite: Russian 412K.

#### **RUS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Russian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted

as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **RUS 324. Third-Year Russian I.**

Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Russian 611C or 412L.

#### **RUS 325. Third-Year Russian II.**

Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Russian 324 or appropriate score on Russian placement examination.

#### **RUS 326. Topics in Fourth-Year Russian I.**

A fourth-year course designed to enhance the student's skills in a variety of functional areas. Topics may include advanced oral communication, stylistics, Russian for business, literary translation of legal and business documents, scientific and technical translation. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **RUS 327. Fourth-Year Russian II.**

Continuation of Russian 326. Three lecture hours a week for one semester. Prerequisite: Russian 326.

#### **RUS 328C. Russian for Heritage Speakers I.**

Designed for heritage Russian language speakers who have had little or no formal training in the language. Focuses on reading, writing, grammar, and communication skills for formal and professional situations. Three lecture hours a week for one semester. Russian 326 (Topic: Russian for Russians) and 328C may not both be counted. Prerequisite: Russian 412L, or an appropriate score on the Russian Placement Test and consent of instructor.

#### **RUS 328D. Russian for Heritage Speakers II.**

Continuation of Russian 328C. Three lecture hours a week for one semester. Russian 326 (Topic: Russian for Russians) and 328D may not both be counted. Prerequisite: Russian 328C.

#### **RUS 329. Survey of Original Texts in Russian Literature.**

Introduction to the reading and analysis of original literary texts representing prose, poetry, and drama, with emphasis on each work's cultural and historical background. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Two years of coursework in Russian, or the equivalent.

#### **RUS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Russian.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **RUS 330. Topics in Russian Culture.**

Study of a selected aspect or aspects of Russian culture, including theatre, film, visual arts, folklore. Readings and lectures in English.

Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Historical Survey of Russian Music.** Same as Russian, East European, and Eurasian Studies 325 (Topic 20: Historical Survey of Russian Music). Focus on the role of Russian Music in its social and historical context. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Historical Survey of Russian Music), 325 (Topic 20), Russian 330 (Topic: Historical Survey of Russian Music), 330 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: Contemporary Russian Cinema.** Same as Russian, East European and Eurasian Studies 325 (Topic 11: Contemporary Russian Cinema). Uses contemporary Russian film both as a means of exploring the confusion that resulted from the demise of the Soviet Union in 1991 and the search for a new sense of identity in Russia throughout the 1990s and early 2000s. Only one of the following may be counted: Russian 330 (Topic: Contemporary Russian Cinema), 330 (Topic 4), Russian, East European, and Eurasian Studies 325 (Topic 11). Prerequisite: Upper-division standing.

**Topic 5: The Apocalypse in Russian Literature and Culture.** Russian, East European and Eurasian Studies 325 (Topic 12: The Apocalypse in Russian Literature and Culture). Explores and analyzes apocalyptic consciousness in Russian literature and culture from the Middle Ages to the present. Emphasis will be on such themes as the expectation of the end of the world, identification of the Antichrist, messianic prophecy, and visions of an afterlife. Only one of the following may be counted: Russian 330 (Topic: The Apocalypse in Russian Literature and Culture), 330 (Topic 5), Russian, East European and Eurasian Studies 325 (Topic: The Apocalypse in Russian Literature and Culture), 325 (Topic 12). Prerequisite: Upper-division standing.

**Topic 6: Introduction to Old Russian Literature and Culture.** Same as Russian, East European and Eurasian Studies 325 (Topic 13: Introduction to Old Russian Literature and Culture). Medieval and early modern Russian literature and culture, including literary texts from Kievan and Muscovite Rus. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: The Icon and the Sword: An Introduction to Old Russian Literature and Culture), 325 (Topic 13), Russian 330 (Topic: The Icon and the Sword: An Introduction to Old Russian Literature and Culture), 330 (Topic 6). Prerequisite: Upper-division standing.

**Topic 7: Twentieth-Century Russian Culture.** Same as Russian, East European and Eurasian Studies 325 (Topic 14: Twentieth-Century Russian Culture). Survey of the political, social, and cultural history of Russia during the Soviet period, from the revolutionary events of 1917 until the dissolution of the Soviet government and political system in December 1991. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Twentieth-Century Russian Culture), 325 (Topic 14), Russian 330 (Topic: Twentieth-Century Russian Culture), 330 (Topic 7). Prerequisite: Upper-division standing.

**Topic 8: Russian Youth Culture, Late Soviet to Present.** Same as Russian, East European, and Eurasian Studies 325 (Topic 19: Russian Youth Culture, Late Soviet to Present). Examines the history and cultural products (films, music, writings) of Russia's youth, and their impact on contemporary society and politics. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Russian Youth Culture, Gorbachev to Present), 325 (Topic 19), Russian 330 (Topic: Russian Youth

Culture, Gorbachev to Present), 330 (Topic 8). Prerequisite: Upper-division standing.

### RUS 356. Russian Literature in Translation.

A survey of nineteenth- and/or twentieth-century Russian literature. Lectures and readings in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The Russian Novel.** Same as English 322 (Topic 37: The Russian Novel) and Russian, East European, and Eurasian Studies 325 (Topic 9: The Russian Novel). Only one of the following may be counted: English 322 (Topic 37), European Studies 361 (Topic: The Russian Novel), Russian 356 (Topic 1), Russian, East European, and Eurasian Studies 325 (Topic 9). Prerequisite: Upper-division standing.

**Topic 2: Political Terror in Russian Literature.** Same as Russian, East European, and Eurasian Studies 325 (Topic 17: Political Terror in Russian Literature). Explores works dealing with political terror and oppression by Dostoevsky, Bely, Babel, Akhmatova, and Solzhenitsyn. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: Terror in Russia: Method, Madness, Murder), 325 (Topic 17), Russian 356 (Topic: Terror in Russia: Method, Madness, Murder), 356 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: War and Revolution in Russian Literature and Culture.** Same as Russian, East European, and Eurasian Studies 325 (Topic 18: War and Revolution in Russian Literature and Culture). Examines Russian narratives of war and revolution as represented in fiction, cinema, and journalism. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: War and Peace in Russian Literature and Culture), 325 (Topic 18), Russian 356 (Topic: War and Peace in Russian Literature and Culture), 356 (Topic 3). Prerequisite: Upper-division standing.

### RUS 360. Study of an Individual Writer.

Readings in translation of selected works of one major Russian writer. Conducted in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: The Major Works of Dostoevsky.** Same as Russian, East European and Eurasian Studies 325 (Topic 10: The Major Works of Dostoevsky). Explores the dilemmas of homicide, suicide, patricide, and redemption in the novels of Fyodor Dostoevsky. Only one of the following may be counted: Core Texts and Ideas 345 (Topic: Major Works of Dostoevsky), Russian 360 (Topic: Major Works of Dostoevsky), 360 (Topic 1), Russian, East European and Eurasian Studies 325 (Topic: Major Works of Dostoevsky), 325 (Topic 10). Prerequisite: Upper-division standing.

**Topic 2: The Major Works of Tolstoy.** Same as Russian, East European, and Eurasian Studies 325 (Topic 16: The Major Works of Tolstoy). Explores Russian writer Lev Nikolaevich Tolstoy, particularly his progression from idealizing family life and the Russian state to renouncing sexual love and national allegiances. Only one of the following may be counted: Russian, East European, and Eurasian Studies 325 (Topic: The Major Works of Tolstoy), 325 (Topic 16), Russian 360 (Topic: Major Works of Tolstoy), 360 (Topic 2). Prerequisite: Upper-division standing.

**Topic 3: Bulgakov's Master and Margarita.** Explores the novel in the context of other literary works by Bulgakov and its varied

sources in world literature, music, and the visual arts. Prerequisite: Upper-division standing.

### **RUS 369. Topics in Russian Linguistics.**

Introduction to selected topics in the structure or history of Russian. Conducted in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Structure of Russian.** Structure of contemporary Russian: phonology (sound structure), morphology (word structure), and syntax (sentence structure). Prerequisite: Credit or registration for Russian 325.

### **RUS 379. Conference Course in Russian Language or Literature.**

Conference course. May be repeated for credit. Prerequisite: Six semester hours of upper-division coursework in Russian or consent of instructor and the chair of the department.

### **RUS 679H. Honors Tutorial Course.**

Supervised individual research on a literary or linguistic problem, which culminates in an honors paper of some length. Conference course for two semesters. Must be taken for special honors in addition to the major requirement. Prerequisite: For 679HA, upper-division standing, a University grade point average of at least 3.00, and a grade point average in Russian of at least 3.50; for 679HB, Russian 679HA.

## **Serbian/Croatian: S C**

### **Lower-Division Courses**

#### **S C 601C. Intensive Serbian/Croatian I.**

Not open to native or heritage speakers of Serbian/Croatian. Emphasis on developing oral proficiency in Serbian/Croatian using intensive methods of instruction. Six lecture hours a week for one semester. Serbian/Croatian 601C and 506 may not both be counted. Serbian/Croatian 601C and 507 may not both be counted.

#### **S C 506. First-Year Serbian/Croatian I.**

Emphasis on proficiency in four skills: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Serbian/Croatian 601C and 506 may not both be counted.

#### **S C 507. First-Year Serbian/Croatian II.**

Emphasis on proficiency in four skills: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Serbian/Croatian 601C and 507 may not both be counted. Prerequisite: Serbian/Croatian 506.

#### **S C 611C. Intensive Serbian/Croatian II.**

Not open to native or heritage speakers of Serbian/Croatian. Continuing intensive development of proficiency in Serbian/Croatian, with a focus on speaking and the reading of authentic texts. Six lecture hours a week for one semester. Serbian/Croatian 611C and 312K may not both be counted. Serbian/Croatian 611C and 312L may not both be counted. Prerequisite: Serbian/Croatian 601C or 507.

#### **S C 312K. Second-Year Serbian/Croatian I.**

Listening, speaking, reading, and writing at the second-year level. Three lecture hours a week for one semester. Serbian/Croatian 611C

and 312K may not both be counted. Prerequisite: Serbian/Croatian 601C or 507.

#### **S C 312L. Second-Year Serbian/Croatian II.**

Listening, speaking, reading, and writing at the advanced, second-year level. Three lecture hours a week for one semester. Serbian/Croatian 611C and 312L may not both be counted. Prerequisite: Serbian/Croatian 312K.

## **Upper-Division Courses**

#### **S C 324. Topics in Serbian/Croatian Studies.**

Selected aspects of Serbian/Croatian history and culture. Conducted in English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

#### **S C 325. Third-Year Serbian/Croatian I.**

Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Serbian/Croatian 611C or 312L.

#### **S C 326. Third-Year Serbian/Croatian II.**

Oral expression, reading, and composition. Three lecture hours a week for one semester. Prerequisite: Serbian/Croatian 325.

#### **S C 379. Conference Course in Serbian/Croatian.**

Conference course. May be repeated for credit. Prerequisite: Serbian/Croatian 312K and 312L and consent of instructor.

## **Slavic: SLA**

### **Lower-Division Courses**

#### **SLA 301. Introduction to Slavic Civilization.**

Introduction to selected topics in the cultures of the Slavic peoples. Conducted in English. Three lecture hours a week for one semester. May not be used to fulfill the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary.

**Topic 1: The Vampire in Slavic Cultures.** Same as Russian, East European and Eurasian Studies 302 (Topic 1: Vampire in Slavic Cultures). Examines the vampire in the cultures of Russia and Eastern Europe, including manifestations in literature, religion, art, film, and common practices from its origins to present. Only one of the following may be counted: Comparative Literature 305 (Topic: Vampire in Slavic Cultures), European Studies 307 (Topic: Vampire in Slavic Cultures), Russian, East European, and Eurasian Studies 302 (Topic: The Vampire in Slavic Cultures), 302 (Topic 1), Slavic 301 (Topic: The Vampire in Slavic Cultures), 301 (Topic 1).

#### **SLA 318Q. Supervised Research.**

Individual instruction.

#### **SLA 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Slavic.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work



in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### SLA 324. Seminar on Slavic and East European Studies.

Examination of selected topics in the cultures and societies of Central and Eastern Europe. Conducted in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Chechnya: the Politics, Power, and People.** Same as Russian, East European, and Eurasian Studies 345 (Topic 5: Chechnya: the Politics, Power, and People). Considers the history, culture, religions and recent upheaval of the region of the northern Caucasus called Chechnya. Only one of the following may be counted: Russian, East European, and Eurasian Studies 345 (Topic: Chechnya: the Politics, Power, and People), 345 (Topic 5: Chechnya: the Politics, Power, and the People), Slavic 324 (Topic: Chechnya: the Politics, Power, and People), 324 (Topic 3). Prerequisite: Upper-division standing.

**Topic 4: Slavs in the Western Imagination.** Same as Russian, East European, and Eurasian Studies 325 (Topic 15: Slavs in the Western Imagination). Examines representations of Eastern, Western, and Southern Slavs in Western Europe and North America. Only one of the following may be counted: Russian, East European, and Eurasian Studies, 325 (Topic: Slavs in the Western Imagination), 325 (Topic 15), Slavic 324 (Topic: Slavs in the Western Imagination), 324 (Topic 4). Prerequisite: Upper-division standing.

**Topic 6: Russian Fairy Tales.** Explores Russia's folk and fairy tales, from the early collections of short morality tales, to the complex productions of fairy tales in classical and contemporary ballet and opera. Prerequisite: Upper-division standing.

### SLA 325. Topics in Jewish Life and Culture in Eastern Europe.

Study of a selected aspect or aspects of Jewish life in Eastern Europe--literature, theatre, visual arts, folklore, religious movements--with emphasis on relationships with Slavic and other East European cultures. Readings and lectures in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### SLA 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Slavic.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Slavic and Eurasian Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### SLA 358Q. Supervised Research.

Individual instruction. Prerequisite: Upper-division standing.

### SLA 379. Conference Course in Slavic and East European Languages and Literatures.

Conference course. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

## Slavic and Eurasian Languages: SEL

### Lower-Division Courses

#### SEL 601C. Intensive Slavic and Eurasian Languages I.

Emphasis on basic communication skills in Slavic and Eurasian languages: listening, speaking, reading, and writing. Includes introduction to Slavic and Eurasian cultures. Six lecture hours a week for one semester. Slavic and Eurasian Languages 601C and 506 may not both be counted unless the languages vary. Slavic and Eurasian Languages 601C and 507 may not both be counted unless the languages vary. May be repeated for credit when the topics vary.

#### SEL 506. First-Year Slavic and Eurasian Languages I.

Emphasis on four-skills proficiency: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Slavic and Eurasian Studies 601C and 506 may not both be counted unless the languages vary. May be repeated for credit when the topics vary.

#### SEL 507. First-Year Slavic and Eurasian Languages II.

Emphasis on four-skills proficiency: listening, speaking, reading, and writing. Five lecture hours a week for one semester. Slavic and Eurasian Languages 601C and 507 may not both be counted unless the languages vary. May be repeated for credit when the topics vary. Prerequisite: Slavic and Eurasian Languages 506 in the same language.

#### SEL 611C. Intensive Slavic and Eurasian Languages II.

Continuing intensive development of communication abilities in Slavic and Eurasian languages with emphasis on the four basic skills: listening, speaking, reading, and writing. Includes an introduction to Slavic and Eurasian cultures. Six lecture hours a week for one semester. Slavic and Eurasian Languages 611C and 312K may not both be counted unless the languages vary. Slavic and Eurasian Languages 611C and 312L may not both be counted unless the languages vary. May be repeated for credit when the topics vary. Prerequisite: Slavic and Eurasian Languages 601C or 507 in the same language.

#### SEL 312K. Second-Year Slavic and Eurasian Languages I.

Listening, speaking, reading, and writing at the second-year level. Three lecture hours a week for one semester. Slavic and Eurasian Studies 611C and 312K may not both be counted unless the languages vary. May be repeated for credit when the topics vary. Prerequisite: Slavic and Eurasian Languages 601C or 507 in the same language.

#### SEL 312L. Second-Year Slavic and Eurasian Languages II.

Listening, speaking, reading, and writing at the advanced, second-year level. Three lecture hours a week for one semester. Slavic and Eurasian Languages 611C and 312L may not both be counted unless the languages vary. May be repeated for credit when the topics vary. Prerequisite: Slavic and Eurasian Languages 312K in the same language.

# Department of Sociology

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Sociology: SOC

### Lower-Division Courses

#### **SOC 101C. Introduction to the Department of Sociology.**

The discipline of sociology as taught at the University. One lecture hour a week for one semester. Recommended for all sociology majors within one year of declaring the major.

#### **SOC 302 (TCCN: SOCI 1301). Introduction to the Study of Society.**

The nature of human societies, social processes, social interaction, and the sociological approach. Three lecture hours or two lecture hours and one discussion hour a week for one semester.

#### **SOC 308 (TCCN: SOCI 1306). Topics in Introductory Sociology.**

A review of contemporary social topics from a sociological perspective, with the instructor selecting one topic for emphasis. Three lecture hours a week for one semester. Sociology 308 (Topic: Ethnicity and Gender: La Chicana) and 308D may not both be counted. May be repeated for credit when the topics vary.

##### **Topic 2: Women's Reproductive Health for Nonscience Majors.**

Same as Nursing 307 (Topic 1: Women's Reproductive Health for Nonscience Majors) and Women's and Gender Studies 301 (Topic 7: Women's Reproductive Health for Nonscience Majors). Overview of contemporary women's reproductive health issues, with emphasis on historical, physiological, psychosocial, and cultural influences that affect the reproductive health of women during adolescence, the childbearing years, and midlife. Only one of the following may be counted: Pharmacy 318W, Nursing 307 (Topic 1), Sociology 308 (Topic 2), Women's and Gender Studies 301 (Topic 7). Prerequisite: One year of high school biology, or Biology 301L or 309D or the equivalent.

**Topic 3: Life-and-Death Decisions.** Covers a range of ethical questions related to issues of life and death, with emphasis on four main areas: general value and definitional issues, issues of creation, issues of termination, and a comparative summary.

#### **SOC 308C. Peace and Conflict.**

Theories of conflict, violence, and war; nonviolence and peace movements; arms control and conflict resolution; alternative security systems. Three lecture hours a week for one semester.

#### **SOC 308D. Ethnicity and Gender: La Chicana.**

Same as Mexican American Studies 319 (Topic 1: Ethnicity and Gender: La Chicana) and Women's and Gender Studies 301 (Topic 6: Ethnicity and Gender: La Chicana). Three lecture hours a week for one semester.

#### **SOC 309. Chicanos in American Society.**

Same as Mexican American Studies 310. Introduction to the study of American character and its bearing on the Chicano experience. Three lecture hours a week for one semester.

#### **SOC 313K. Introduction to the Sociology of Religion.**

Introduction to sociological methods in the study of religion. Three lecture hours a week for one semester. Only one of the following may be counted: Asian Studies 301M (Topic 5: Introduction to the Study of Religion), Religious Studies 310, Sociology 313K.

#### **SOC 317L. Introduction to Social Statistics.**

Restricted to sociology majors. Measures of central tendency and dispersion, the binomial and chi-square distributions, tests of hypotheses and parameter estimation, and simple correlation and regression. Three lecture hours and one laboratory hour a week for one semester. Required of all sociology majors.

#### **SOC 317M. Introduction to Social Research.**

Students may not enroll in Sociology 317M more than twice. To enroll for the second time, students must receive consent of the undergraduate adviser. The logic of scientific research, general methods of data collection and analysis, and computer applications. Two lecture hours and two laboratory hours a week for one semester. Required of all sociology majors. Prerequisite: Sociology 317L.

#### **SOC 318 (TCCN: SOCI 2339). Juvenile Delinquency.**

Environments in which juvenile delinquency develops; delinquent subcultures and peer groups; societal reactions in schools, courts, and other agencies. Three lecture hours a week for one semester.

#### **SOC 319. Introduction to Social Demography.**

Social consequences of changes in fertility, mortality, migration, population growth and composition. Three lecture hours a week for one semester.

#### **SOC 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Sociology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Sociology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### **SOC 320K. Political Sociology.**

A survey of approaches to the study of the state as a social structure; political power and power systems; ideology; political parties and elites. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **SOC 321J. Religion, Violence, and Nonviolence.**

Historical examination of religious beliefs and practices regarding warfare and violence. Three lecture hours a week for one semester. Religious Studies 373 (Topic 1: Religion, Violence and Nonviolence) and Sociology 321J may not both be counted. Prerequisite: Upper-division standing.

### **SOC 321K. Contemporary Issues in Sociology: Special Topics.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Post-Soviet Societies.** Only one of the following may be counted: Russian, East European, and Eurasian Studies 345 (Topic 1: Post-Soviet Societies); Sociology 321K (Topic 1); Women's and Gender Studies 345 (Topic: Post-Soviet Societies).

**Topic 4: Women and Socialism.** Same as Women's and Gender Studies 345 (Topic 25: Women and Socialism). The origins of socialism, its relationship to gender issues, and the role women have played in existing socialist states as revolutionaries and citizens. Prerequisite: Upper-division standing.

**Topic 5: Sociology of Intentional Community.** Literary, historical, and contemporary records of utopian ventures to create the perfect society, and how these attempts shed light on the nature of the less-than-perfect human societies in which we live. Prerequisite: Upper-division standing.

**Topic 9: Race, Gender, and Social Movements.** Exploration of social movements related to racial minorities in the United States. Focuses on Asian Americans, with comparisons drawn between them and African Americans and Latinos. Only one of the following may be counted: Asian American Studies 330 (Topic: South Asian American Experience), Sociology 321K (Topic 9), 321K (Topic: South Asian American Experience), Women's and Gender Studies 340 (Topic: South Asian American Experience). Prerequisite: Upper-division standing.

**Topic 10: Gender, Work, and the Labor Force.** Critical issues pertaining to workplaces and labor markets in industrial societies. Includes gender inequality in the labor market, social organization of work, types of work and employment, and changes in the labor force in industrial societies. Uses examples from East Asian countries to illustrate how the institutional context shapes women's employment behavior and economic conditions. Only one of the following may be counted: Asian Studies 361 (Topic: Work and Labor Markets), Sociology 321K (Topic 10), 321K (Topic: Work and Labor Markets), Women's and Gender Studies 322 (Topic: Work and Labor Markets). Prerequisite: Upper-division standing.

### **SOC 321L. Sociology of Education.**

Same as African and African Diaspora Studies 321L and Women's and Gender Studies 345 (Topic 23: Sociology of Education). Education as a societal institution, with emphasis on the United States educational system: how the system works; the effects of the system; recent changes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 321M. Race and Popular American Culture.**

Same as African and African Diaspora Studies 321M and Radio-Television-Film 359 (Topic 2: Race and Popular American Culture). The intersection of African American racial politics and the changing popular media industry, especially film, music, and television. Three lecture hours a week for one semester. Prerequisite: For radio-television-film majors, upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing.

### **SOC 322R. Race, Sport, and Identity.**

Same as African and African Diaspora Studies 374D (Topic 5: Race, Sport, and Identity). Explores the sociological significance of sport in relation to the construction of racialized identities. Focuses primarily but not exclusively on the black experience in sport, and examines the changing meanings given to sport throughout the twentieth century. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Race, Sport, and Identity), 374D (Topic 5), Sociology 321K (Topic 8: Race, Sport, and Identity), 322R. Prerequisite: Upper-division standing and Sociology 302.

### **SOC 322S. The Sociology of Sport.**

Examines the place of sport within social theory, with particular emphasis on the understanding of sport and society found in functionalist, Weberian, Marxist, figurational, feminist, and postmodernist accounts. This theoretical framework is used to explore key social issues in sport, including gender and representation, violence and deviancy, commercialization and college sport, race and inequality, and nationalism and identity. Three lecture hours a week for one semester. Sociology 321K (Topic 7: The Sociology of Sport) and 322S and may not both be counted. Prerequisite: Upper-division standing and Sociology 302.

### **SOC 322V. Race, Gender, and Surveillance.**

Provides an overview of theories in the sociology of social control, with a focus on risk, power, ethics, and surveillance. Examines historical transformations in social control and the distributions of power in U.S. and global contexts, with attention to race, gender, and class. Topics include: the transatlantic slave trade; prisons and punishment; the gaze, voyeurism and reality television watching; the Internet; travel and state borders; privacy; biometrics and the body. Three lecture hours a week for one semester. Sociology 321K (Topic: Surveillance and Social Control) and 322V may not both be counted. Prerequisite: Upper-division standing.

### **SOC 323. The Family.**

The American family in historical and comparative perspective; emphasis on recent changes and prospects for the future. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 324K. Social Change in Developing Nations.**

Overview of changing social structure in the Third World. Three lecture hours a week for one semester. Latin American Studies 325 (Topic 2: Social Change in Developing Nations) and Sociology 324K may not both be counted. Prerequisite: Upper-division standing.

### **SOC 325K. Criminology.**

An investigation into the nature of criminal events, including homicide, rape, robbery, property crimes, and white-collar crimes. Also examines the United States criminal justice system. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and completion of six semester hours of coursework in sociology.

### **SOC 325L. Sociology of Criminal Justice.**

Police, courts, and prisons: how they work; their impact on those who pass through them. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 329. Social Stratification.**

The types and levels of social inequality; the institutional and group processes that generate inequality; the interplay of social,



organizational, economic, and political forces that affect the degree of differential opportunities and rewards in society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing. Completion of Sociology 317L or another statistics course is recommended, but not required.

**SOC 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Sociology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Sociology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

**SOC 330C. Death and Dying: Sociological Perspectives.**

Sociological perspectives on definitions of death; group differences in mortality rates and causes of death; social meanings of death and dying; treatment of the dying and the dead; and grief and bereavement. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**SOC 330P. Sociology and Social Psychology.**

Examines how individuals perceive, interact with, and affect other individuals from the perspectives of both psychology and sociology. Three lecture hours a week for one semester. Sociology 321K (Topic: Sociology and Social Psychology) and 330P may not both be counted. Prerequisite: Upper-division standing.

**SOC 333K. Sociology of Gender.**

Same as Women's and Gender Studies 322 (Topic 1: Sociology of Gender). Inequality between the sexes; men's and women's changing roles in society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**SOC 335. Society of Modern Mexico.**

Same as Latin American Studies 325 (Topic 1: Society of Modern Mexico) and Urban Studies 354 (Topic 2: Society of Modern Mexico). Family, community, industrialization, and urbanization in modern Mexico. Three lecture hours a week for one semester.

**SOC 336C. American Dilemmas.**

Examines a variety of critical American social problems, including problems in the economic, political, and health care systems, as well as inequities based on income, gender, and race. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

**SOC 336D. Race, Class, and Health.**

Designed to introduce students to the complex relationships among race, class, gender, and health status. Investigates how health is linked to individual behaviors and to the interaction between people and their social, cultural, and physical environments. Three lecture hours a week for one semester. Only one of the following may be counted: African and African Diaspora Studies 374 (Topic: Race, Class, and Health), Sociology 321K (Topic: Race, Class, and Health), 336D. Prerequisite: Upper-division standing.

**SOC 336G. Gender Politics in the Islamic World.**

Study of the Islamic world and major sociological concepts such as gender, social organizations, culture, and politics. Examines how culture is mediated by politics, resulting in diverse interpretations of

Islam and in different policies with respect to women's rights. Three lecture hours a week for one semester. Sociology 321K (Topic: Gender Politics in the Islamic World) and 336G may not both be counted. Prerequisite: Upper-division standing.

**SOC 336L. Global Gender Inequality.**

Patterns of gender inequality and women's movements in different cultural contexts, with emphasis on the interface between gender and social organization, and between culture and politics. Includes the legacy of colonialism, the effect of globalization, and the interaction between local and national movements and the international discourse on women's rights. Three lecture hours a week for one semester. Only one of the following may be counted: European Studies 361 (Topic: Global Gender Inequality), Middle Eastern Studies 322K (Topic: Global Gender Inequality), Sociology 321K (Topic: Global Gender Inequality), 336L, Women's and Gender Studies 345 (Topic: Global Gender Inequality). Prerequisite: Upper-division standing.

**SOC 336P. Social Psychology and the Law.**

How courts make use of social science, as well as how social scientists study the legal system. Considers the uses of social science across multiple types of legal domains, such as eyewitnesses to crime, jury trials, punishment, children in the courts, and a variety of public policy issues. Three lecture hours a week for one semester. Sociology 321K (Topic: Social Psychology and the Law) and 336P may not both be counted. Prerequisite: Upper-division standing.

**SOC 338M. Politics and Culture of Contemporary Mexico.**

Same as Mexican American Studies 374 (Topic 28: Politics and Culture of Contemporary Mexico), Government 337M (Topic 5: Politics and Culture of Contemporary Mexico), and Latin American Studies 325 (Topic 3: Politics and Culture of Contemporary Mexico). Introduction to the contemporary Mexican political system and the ways in which political change and democratization are recasting the political and civic culture of contemporary Mexico. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

**SOC 340C. Globalization.**

A sociological analysis of the interrelated economic, political, and cultural aspects of globalization. Examines the consequences of globalization for nations around the world and for groups within these nations. Three lecture hours a week for one semester. Sociology 321K (Topic: Globalization) and 340C may not both be counted. Prerequisite: Upper-division standing.

**SOC 340D. Violence.**

An overview of the different theories of interpersonal and group violence. Includes criminological theories of violent crime, as well as feuding, ethnic and nationalist violence, political violence, and aggression in intimate relations. Three lecture hours a week for one semester. Sociology 321K (Topic: Violence) and 340D may not both be counted. Prerequisite: Upper-division standing.

**SOC 340G. Sociology of Sexualities.**

Review of sociological perspectives on sexuality. Examines how social institutions in U.S. society shape sexual values, beliefs, and practices. Topics include changing cultural images of sexuality, sexual identities, and social movements. Three lecture hours a week for one semester. Sociology 321K (Topic: Sociology of Sexuality) and 340G may not both be counted. Prerequisite: Sociology 302, and either Sociology 333K or three semester hours of coursework in women's and gender studies.



### **SOC 340L. Aging and the Life Course.**

The biological, social, and psychological aspects of human aging from adolescence until death, with special emphasis on cultural norms and the social and demographic context in which aging occurs. Includes the challenges and problems of adjustment at each life stage, and the social, political, and economic consequences of increased longevity and changes in the age structure of the populations of modern societies. Three lecture hours a week for one semester. Sociology 321K (Topic: Aging and the Life Course) and 340L may not both be counted. Prerequisite: Upper-division standing.

### **SOC 340R. Religion and Global Change.**

The global spread and transformations of the major world religions, the interactions between them, and the different social impacts these traditions have on society. Focuses mainly on Christian traditions, but includes various schools of Hinduism, Buddhism, Judaism, and Islam. Three lecture hours a week for one semester. Sociology 321K (Topic: Religion and Global Change) and 340R may not both be counted. Prerequisite: Upper-division standing.

### **SOC 343. Religion and Society.**

Same as Religious Studies 337. The growth and decline of religious groups and traditions; "cults" and new religions; comparative sociology of religion; the United States religious landscape; religion and individual health and well-being; spirituality and other aspects of social life. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 344. Racial and Ethnic Relations.**

Contemporary racial and ethnic problems; emphasis on minority groups in the United States. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 346. The City and Urbanization.**

Same as Urban Studies 354 (Topic 6: The City and Urbanization). Examination of urbanization from a cross-national perspective: discrimination and racial inequality in urban labor markets. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 350M. Sociology Internship Seminar.**

Restricted to students in the College of Liberal Arts. Students serve as supervised, unpaid interns in an agency, organization, or business. Provides an opportunity for students to apply the knowledge and skills acquired in sociology and other liberal arts courses. Three lecture hours and at least nine hours of fieldwork a week for one semester. Prerequisite: Upper-division standing and credit or registration for six semester hours of coursework in sociology.

### **SOC 350N. Research Internship.**

Fieldwork in research and analysis on sociological problems and institutions. About ten hours of fieldwork a week for one semester. Additional lecture hours may be required. May be repeated for credit. Prerequisite: Nine semester hours of coursework in sociology, a University grade point average of at least 3.00, upper-division standing, and consent of the faculty undergraduate adviser.

### **SOC 352. Social Movements.**

Characteristics of crowds, publics, and social movements; their role in social organization and social change. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 352M. Topics in Interdisciplinary Social Science.**

An interdisciplinary analysis of significant social, economic, and political issues. Three lecture hours a week for one semester. Some topics are offered on the letter-grade basis only. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 3: Language and Speech in American Society.** Same as American Studies 321 (Topic 2: Language and Speech in American Society), Anthropology 325N, and Linguistics 373 (Topic 2: Language and Speech in American Society). Prerequisite: Upper-division standing, and Anthropology 302, 305, 307, or Linguistics 306.

**Topic 4: Language in Culture and Society.** Same as Anthropology 325M and Linguistics 373 (Topic 3: Language in Culture and Society). Language as a cultural resource; functions of language in society; survey of language communities. Prerequisite: Anthropology 302, 305, 307, or Linguistics 306; or consent of instructor.

**Topic 5: Family Policy Issues.** Same as Women's and Gender Studies 345 (Topic 12: Family Policy Issues). Consideration of liberal, conservative, and centrist views concerning the major family policy issues facing the United States and other advanced industrial societies.

**Topic 7: Contemporary European Social Theory.** Same as Government 335M (Topic 8: Contemporary European Social Theory) and Philosophy 365 (Topic 4: Contemporary European Social Theory). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

**Topic 8: Contemporary American Social Theory.** Same as Government 335M (Topic 9: Contemporary American Social Theory) and Philosophy 365 (Topic 5: Contemporary American Social Theory). Only one of the following may be counted: Government 335M (Topic: Social Theory), 335M (Topic 9), Philosophy 365 (Topic 5), Sociology 352M (Topic 8). Prerequisite: Upper-division standing and six semester hours of lower-division coursework in government.

**Topic 10: Sociology of South Asia.** Same as Asian Studies 361 (Topic 19: Sociology of South Asia). A broad overview of South Asian society and culture from a sociological perspective. Prerequisite: Upper-division standing.

**Topic 12: Australian Society and Politics.** Same as Government 365N (Topic 10: Australian Society and Politics). Prerequisite: Six semester hours of lower-division coursework in government.

### **SOC 353. Industrial Sociology.**

The work setting; the formal organization of work; individual and collective adaptation in industrial organizations; bureaucracy as a social problem. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 354K. Sociology of Health and Illness.**

Application of sociological concepts and principles to the study of health professions, medical institutions, community medical organization, and the distribution of illness. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 358C. Sociology of Entrepreneurship.**

Same as African and African Diaspora Studies 358C and Management 337 (Topic 16: Sociology of Entrepreneurship). Examines the creation of entrepreneurial activities in the United States, including those of all racial and ethnic groups. Three lecture hours a week for one semester. Prerequisite: For management majors, one of the following courses with a grade of at least C, or two of the following courses with

a grade of at least C in each: Management 336, 336H, Operations Management 335, 335H; for others, sixty semester hours of college coursework.

### **SOC 358D. Health Policy and Health Systems.**

Covers the essentials of health policy and law, including the ways that policy and legal issues impact health care and public health systems. Three lecture hours a week for one semester. Public Health 358D and Sociology 358D may not both be counted. Prerequisite: Upper-division standing.

### **SOC 359. Labor and Labor Movements.**

Overview of work organizations in the United States, with emphasis on globalization, inequality, and labor movements. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 362. Social Change.**

Theories of how and why society changes, with special emphasis on technological innovations, social movements, and demographic transitions. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 366. Deviance.**

Analysis of social norms, conformity, and reactions to norm violations. Topics include behavioral forms of deviance such as suicide and drug abuse and nonbehavioral forms of deviance such as physical abnormality. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 368D. Social Context of Public Health.**

An introduction to the social and behavioral theories that inform the discipline of public health, including practical examples of the ways that these theories are used to understand health-related behaviors and health promotion. Includes data on population distributions of mortality and morbidity, health inequalities, and how underlying social structures impact the health of individuals and communities. Three lecture hours a week for one semester. Public Health 368D and Sociology 368D may not both be counted. Prerequisite: Upper-division standing.

### **SOC 369K. Population and Society.**

The study of populations, including their growth, age structure, and patterns of fertility, mortality, and migration; the social causes and consequences of these phenomena. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **SOC 369L. Analytical Demography.**

Formal demography; stable population theory; life tables and techniques of mortality estimation; estimates and projections. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and college algebra or the equivalent.

### **SOC 679H. Honors Tutorial Course.**

An individual conference course to provide training in sociological research and writing. Conference course for two semesters, with additional meeting times to be arranged. Prerequisite: For 679HA, upper-division standing and admission to the Sociology Honors Program; for 679HB, Sociology 679HA.

### **SOC 379M. Sociological Theory.**

Restricted to sociology majors. Critical examination of major sociological theories and their relevance to current research and social conditions. Three lecture hours a week for one semester. Prerequisite:

Upper-division standing, and six semester hours of coursework in sociology or consent of instructor.

### **SOC 379N. Conference Course.**

Supervised individual study of selected problems in sociology. Conference course. May be repeated for credit. Prerequisite: Upper-division standing, Sociology 302 or the equivalent, nine semester hours of upper-division coursework in sociology or related fields, a University grade point average of at least 3.00, and consent of the faculty undergraduate adviser.

### **SOC 379P. Undergraduate Research Opportunity.**

Restricted to sociology majors. Students participate in research-related activities with faculty members in the Department of Sociology. Activities may include collecting interview or survey data, analyzing statistics, synthesizing research literature, and coding qualitative data. Five to seven hours a week for one semester. May be repeated for credit but may only be taken once on the letter-grade basis. Prerequisite: Upper-division standing, Sociology 302 or the equivalent, nine semester hours of upper-division coursework in sociology or related fields, a University grade point average of at least 3.00, and consent of the faculty undergraduate adviser.

## **Department of Spanish and Portuguese**

Unless otherwise noted below or in the *Course Schedule*, registrar.utexas.edu/schedules/, all upper-division Portuguese courses are conducted in Portuguese, and all upper-division Spanish courses except Spanish 347L and 349 are conducted in Spanish.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Portuguese: POR**

### **Lower-Division Courses**

#### **POR 601D. Introductory Portuguese.**

Development of speaking, listening, reading, and writing skills; building vocabulary, learning basic rules and terminology of grammar; and gaining a better understanding of Portuguese-speaking cultures, with focus on Brazil, in order to communicate in an accurate, effective, and informed manner within a variety of socio-cultural situations. Six lecture hours a week for one semester. Only one of the following may be counted: Portuguese 601D and 610D; 604; 406 and 407; 508; 610S.

#### **POR 303S. Portuguese for Professional Purposes.**

Designed for students in a variety of disciplines who require basic Portuguese language skills while studying abroad. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Portuguese.

#### **POR 604. Accelerated First-Year Portuguese.**

Designed primarily for language majors and students who demonstrate exceptional language ability or scholarship. Six lecture hours a week for one semester. Only one of the following may be counted:

Portuguese 601D and 610D; 604; 406 and 407; 508; 610S.  
Prerequisite: Consent of the lower-division coordinator for Portuguese.

**POR 406 (TCCN: PORT 1411). First-Year Portuguese I.**

Four lecture hours a week for one semester. Only one of the following may be counted: Portuguese 601D and 610D; 604; 406 and 407; 508; 610S.

**POR 407 (TCCN: PORT 1412). First-Year Portuguese II.**

Four lecture hours a week for one semester. Only one of the following may be counted: Portuguese 601D and 610D; 604; 406 and 407; 508; 610S. Prerequisite: Portuguese 406 with a grade of at least C.

**POR 508. Alternate First-Year Portuguese for Spanish Students.**

Designed to provide qualified Spanish students a rapid introduction to the Portuguese language; emphasis on grammar, vocabulary, and translation in the context of Brazilian culture. Five lecture hours a week for one semester. Only one of the following may be counted: Portuguese 601D and 610D; 604; 406 and 407; 508; 610S. Prerequisite: Spanish 312L with a grade of at least B.

**POR 610D. Intermediate Portuguese I.**

Development of speaking, listening, reading, and writing skills; building vocabulary, learning basic rules and terminology of grammar; and gaining a better understanding of Portuguese-speaking cultures, with focus on Brazil, in order to communicate in an accurate, effective, and informed manner within a variety of socio-cultural situations. Six lecture hours a week for one semester. Only one of the following may be counted: 604, 610D, 610S. Only one of the following may be counted: Portuguese 610D, 612, 312K, 516. Prerequisite: Portuguese 601D or 407 with a grade of at least C.

**POR 610S. Portuguese for Spanish Speakers I.**

Designed to provide qualified Spanish-speaking students a rapid introduction to Portuguese language. Development of speaking, listening, reading, and writing skills; building vocabulary, learning basic rules and terminology of grammar; and gaining a better understanding of Portuguese-speaking cultures, with a focus on Brazil, in order to communicate in an accurate, effective, and informed manner within a variety of socio-cultural situations. Six lecture hours a week for one semester. Only one of the following may be counted: Portuguese 601D and 610D; 604; 406 and 407; 508; 610S. Prerequisite: Spanish 611D or 312L with a grade of at least B.

**POR 611D. Intermediate Portuguese II.**

Continuation of Portuguese 610D, with an introduction to more complex grammatical structures. Six lecture hours a week for one semester. Only one of the following may be counted: Portuguese 611D; 611S; 612; 312K and 312L; 516. Prerequisite: Portuguese 508, 610D, 610S, or 312K with a grade of at least C.

**POR 611S. Portuguese for Spanish Speakers II.**

Continuation of Portuguese 610S. Six lecture hours a week for one semester. Only one of the following may be counted: Portuguese 611S, 312K and 312L, 516 or 612. Portuguese 611S and 610D and 611D may not both be counted. Prerequisite: Portuguese 604, 508, or 610S with a grade of at least B.

**POR 612. Accelerated Second-Year Portuguese: Oral Expression, Reading, and Composition.**

Covers the same material as Portuguese 312K and 312L, but in one semester. Six lecture hours a week for one semester. Only one of the

following may be counted: Portuguese 610D and 611D; 611S; 612; 312K and 312L; 516. Prerequisite: Portuguese 604 or 508 with a grade of at least B, or Portuguese 407 with a grade of A; and consent of the lower-division coordinator for Portuguese.

**POR 312K (TCCN: PORT 2311). Second-Year Portuguese I: Oral Expression, Reading, and Composition.**

Three lecture hours a week for one semester. Only one of the following may be counted: Portuguese 610D and 611D; 611S; 612; 312K and 312L; 516. Prerequisite: Portuguese 604, 407, or 508 with a grade of at least C.

**POR 312L (TCCN: PORT 2312). Second-Year Portuguese II: Oral Expression, Reading, and Composition.**

Three lecture hours a week for one semester. Only one of the following may be counted: Portuguese 610D and 611D; 611S; 612; 312K and 312L; 516. Prerequisite: Portuguese 312K with a grade of at least C.

**POR 516. Alternate Second-Year Portuguese for Spanish Speakers.**

For qualified Spanish-speaking students, continued practice in the Portuguese language; emphasis on oral expression, vocabulary expansion, writing, and review of grammar in the context of cultural and literary readings. Five class hours a week for one semester. Only one of the following may be counted: Portuguese 610D and 611D; 611S; 612; 312K and 312L; 516. Prerequisite: Portuguese 508 with a grade of at least B.

**POR 318. Conversation and Composition.**

Intensive practice in oral expression, based on cultural readings, with some writing. Three lecture hours a week for one semester. Prerequisite: Portuguese 312L. With consent of the lower-division coordinator for Portuguese, Portuguese 312L may be taken concurrently.

**POR 319C. Culture and Conversation.**

Designed to improve oral skills and speaking strategies in different discourse genres including informal, formal, academic, and travel. Analysis and discussion of videos, films, short stories, and news articles highlighting Portuguese-speaking culture, with a focus on Brazil. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Portuguese.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses**

**POR 321. Practical Phonetics.**

Recommended for Portuguese majors, especially for those preparing to teach. A thorough review of Portuguese pronunciation, phonetics, and oral reading. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, or 312L.

**POR 322C. Conference Course in Luso-Brazilian Civilization.**

Conference course. Prerequisite: Portuguese 611D, 611S, 612, or 312L, and written consent of the department chair.

**POR 322L. Conference Course in Luso-Brazilian Literature.**

Conference course. Portuguese 611D, 611S, 612 or 312L, and written consent of the department chair.

**POR 326K. Advanced Conversation and Composition.**

Advanced, intensive practice in both oral and written expression based on cultural readings. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 327K. Brazilian Culture and Literature of the Colonial Period.**

Survey of Brazilian literature and culture from the sixteenth century through the late eighteenth century. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 327L. Brazilian Culture and Literature of the Nineteenth Century.**

Survey of Brazilian prose, poetry, and drama. Includes the broad literary and cultural movements of the nineteenth century. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 327M. Brazilian Culture and Literature of the Twentieth Century and Later.**

Survey of Brazilian prose, poetry, and drama. Includes the broad literary and cultural movements of the twentieth century and later. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 328. Introduction to Portuguese Literature.**

Main literary trends and principal writers of Portugal. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 329. Lusophone African Literatures and Cultures.**

Introduction to Lusophone African literatures and cultures from the colonial era through independence and postindependence. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Portuguese.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**POR 130D. Portuguese across Disciplines.**

Students read and discuss Portuguese language materials related to the subject matter of another designated course. One lecture hour a week for one semester. May not be counted towards fulfillment of the

foreign language requirement for any bachelor's degree. Prerequisite: One upper-division Portuguese course or consent of instructor.

**POR 341. Luso-Brazilian Civilization and Culture.**

Analysis of social, political, and cultural aspects of Portugal and/or Brazil. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 350K. Luso-Brazilian Film.**

A study of film from the Lusophone world, including Portugal, Brazil, and Africa. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 352. Brazilian and Spanish American Literature.**

Brazilian and Latin American literature and culture from the twentieth century and later. Studies the literary trends and social roles in the region while comparing and contrasting the culture and history from both Spanish America and Brazil. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 362. Advanced Composition.**

Translation of English texts into Portuguese and free composition; special attention to idiomatic expressions and to grammatical and syntactical features. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 364L. Applied Linguistics.**

Introduction to the linguistic structure of Portuguese; application of linguistic principles to the teaching of Portuguese. Three lecture hours a week for one semester. Prerequisite: Portuguese 611D, 611S, 612, 312L, or 516.

**POR 375. Luso-Brazilian Literature.**

Representative writers and significant periods of Luso-Brazilian literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in Portuguese.

**Topic 5: Brazil: An Introduction.** Same as Latin American Studies 370P (Topic 1: Brazil: An Introduction).

**POR 378H. Honors Seminar.**

Honors seminar on a special topic in literature, linguistics, or civilization. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, admission to the Portuguese Honors Program, and consent of the honors adviser.

**POR 379H. Honors Thesis.**

Supervised individual research on a topic in literature, linguistics, or civilization. The equivalent of three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing, admission to the Portuguese Honors Program, and consent of the honors adviser.



## Portuguese Civilization: PRC

### Lower-Division Courses

#### **PRC 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Portuguese Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### **PRC 320E. Portuguese and Brazilian Civilization.**

Social, literary, and cultural topics of Portugal, Brazil, Portuguese Africa, and Portuguese Asia. Conducted in English. Three lecture hours a week for one semester. May be counted toward a major or a minor in Portuguese. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing.

#### **PRC 325E. Brazilian Studies.**

Studies Brazil from several interdisciplinary perspectives. Focuses on diverse aspects of Brazilian history, social issues, literature, and culture. Taught in English. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **PRC 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Portuguese Civilization.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Spanish: SPN

### Lower-Division Courses

#### **SPN 301. Spanish for Graduate Students in Other Departments.**

For graduate students in other departments seeking to fulfill degree language requirements. No auditors. Purpose: To introduce fundamentals of grammar and lexicon to enable students to read texts in their areas of specialization. Primary aim: To allow students to acquire reading proficiency. Also presents audio-aural aspect. Three class hours a week for one semester. Offered every fall semester. May not be used to fulfill the undergraduate foreign language requirement. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

#### **SPN 601D. Introductory Spanish.**

Six-hour course focused on the development of multilingual literacy through the analysis and use of Spanish to achieve linguistic competence (basic verb tenses, pronouns, adjectives, conditional statements), communication and interactional competence

(complimenting, thanking, requesting, giving opinions), and metalinguistic competence (parts of speech, sociolinguistic cues). Six lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 506. Only one of the following may be counted: Spanish 601D, 604, 507, 508K.

#### **SPN 303S. Spanish for Professional Purposes.**

Designed for students in a variety of disciplines who require basic Spanish language skills while studying abroad. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Spanish.

#### **SPN 604. Accelerated Beginners' Spanish.**

Designed primarily for language majors and students who demonstrate exceptional language ability or scholarship. A six-hour course comparable to Spanish 506 and 507. Six lecture hours a week for one semester. Offered in the fall semester only. Only one of the following may be counted: Spanish 601D, 604, 506. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: Written consent of the lower-division coordinator for Spanish.

#### **SPN 305. Spanish for Graduate Students in Other Departments.**

No auditors. Continuation of Spanish 301. Vocabulary and grammar expansion through intense practice in reading texts according to class interests; increased emphasis on the audio-aural aspect. Three lecture hours a week for one semester. Offered every spring semester. May not be used to fulfill the undergraduate foreign language requirement. Offered on the letter-grade basis only. Prerequisite: Graduate standing, and Spanish 301 or consent of instructor.

#### **SPN 506 (TCCN: SPAN 1511). First-Year Spanish I.**

Designed for students who have not previously studied any Spanish. Five lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 506.

#### **SPN 507 (TCCN: SPAN 1512). First-Year Spanish II.**

Five lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: Spanish 506 with a grade of at least C.

#### **SPN 508K. Alternate First-Year Spanish II.**

An accelerated review of grammatical structures covered in Spanish 506, followed by study of the new material covered in Spanish 507. Five lecture hours a week for one semester. Only one of the following may be counted: Spanish 601D, 604, 507, 508K. Prerequisite: Transfer credit or credit by examination for Spanish 506, or high school coursework in Spanish, or credit for Spanish 506 earned at the University of Texas at Austin more than one calendar year ago, with a grade of at least C.

#### **SPN 610D. Intermediate Spanish I.**

Six-hour course focused on the development of multilingual literacy through the analysis and use of Spanish to achieve linguistic competence (aspect, subjunctive, hypotheticals, passive voice), communication and interactional competence (apologizing, requesting, circumlocution), and metalinguistic competence (critical analysis of oral and written texts). Six lecture hours a week for one semester. Only one of the following may be counted: Spanish 610D, 612, 312K. Prerequisite: Spanish 601D, 604, 507, or 508K with a grade of at least C.

### **SPN 611D. Intermediate Spanish II.**

Six-hour course focused on the development of multilingual literacy through the analysis and use of Spanish to achieve linguistic competence (aspect, subjunctive, passive voice), communication and interactional competence (pragmatics, cultural perspectives), and metalinguistic competence (dialectal differences). Six lecture hours a week for one semester. Only one of the following may be counted: Spanish 611D, 612, 312L. Prerequisite: Spanish 610D or 312K with a grade of at least C.

### **SPN 612. Accelerated Second-Year Spanish: Oral Expression, Reading, and Composition.**

A six-semester-hour course comparable to Spanish 312K and 312L combined. Six lecture hours a week for one semester. Offered in the spring semester only. Only one of the following may be counted: Spanish 610D, 612, 312K. Only one of the following may be counted: Spanish 611D, 612, 312L. Prerequisite: Spanish 604 with a grade of at least B, or Spanish 507 or 508K with a grade of A.

### **SPN 312K (TCCN: SPAN 2311). Second-Year Spanish I.**

Three lecture hours a week for one semester. Only one of the following may be counted: Spanish 610D, 612, 312K. Prerequisite: Spanish 604, 507, or 508K with a grade of at least C.

### **SPN 312L (TCCN: SPAN 2312). Second-Year Spanish II.**

Three lecture hours a week for one semester. Only one of the following may be counted: Spanish 611D, 612, 312L. Prerequisite: Spanish 312K with a grade of at least C.

### **SPN 315N. Readings in Hispanic Literature.**

Readings in various literary genres and in the literatures of the Spanish-speaking countries. Development of skills needed to read and to discuss literary texts in Spanish. Three lecture hours a week for one semester. Spanish 315N and 318 may not both be counted. May not be counted toward a major in Spanish. Prerequisite: Spanish 612 or 312L.

### **SPN 318. Conversation and Composition.**

Designed to give intensive practice in oral expression, based on cultural readings, with some writing. Three lecture hours a week for one semester. Spanish 315N and 318 may not both be counted. May not be counted toward a major in Spanish. This course or the equivalent is recommended but not required for all majors in Spanish. Prerequisite: Spanish 612 or 312L.

### **SPN 319. Advanced Oral Expression.**

Designed to develop listening comprehension and oral skill to an advanced level. Three lecture hours a week for one semester. May not be counted toward a major in Spanish. Recommended for all Spanish majors. Prerequisite: Consent of instructor.

### **SPN 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Spanish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May not be counted toward a major in Spanish. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **SPN 322K. Civilization of Spanish America.**

Same as Latin American Studies 370S (Topic 3: Civilization of Spanish America). Survey of the social and cultural evolution of the Spanish American countries. Conducted in Spanish. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 325K. Introduction to Spanish American Literature through Modernism.**

Same as Latin American Studies 370S (Topic 4: Introduction to Spanish American Literature through Modernism). Main literary trends and principal writers in Spanish America from the sixteenth century through Modernism. Conducted in Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 325L. Introduction to Spanish American Literature since Modernism.**

Same as Latin American Studies 370S (Topic 5: Introduction to Spanish American Literature since Modernism). Main literary trends and principal writers in Spanish America since Modernism. Conducted in Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 326K. Introduction to Spanish Literature before 1700.**

Main literary trends and principal writers from the Middle Ages through the Golden Age. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 326L. Introduction to Spanish Literature since 1700.**

Main trends and principal writers, with emphasis on the Romantics, the Realists of the nineteenth century, the Generation of '98, and contemporary figures. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 327G. Advanced Grammar and Composition I.**

Study and practice of Spanish grammar, focusing on grammar points of particular concern to English speakers. Includes oral exercises and guided composition. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 327W. Advanced Grammar and Composition II.**

Designed to develop writing skills needed for upper-division coursework in Spanish. Emphasizes grammar using various topics in Spanish language, literature, and culture. Explores different compositional styles. Three lecture hours a week for one semester. Prerequisite: Spanish 327G with a grade of at least C.

### **SPN 328. Spanish Civilization.**

A survey of the social, political, and cultural history of Spain. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Spanish.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Spanish and Portuguese. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in

an affiliated studies program. May not be counted toward a major in Spanish. May be repeated for credit when the topics vary.

### **SPN 130D. Spanish across Disciplines.**

Students read and discuss Spanish language materials related to the subject matter of another designated course. One lecture hour a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. Prerequisite: One upper-division Spanish course or consent of instructor.

### **SPN 345L. Introduction to Hispanic Linguistics.**

Introduction to the study of the Spanish language through different areas of linguistics such as phonology, morphology, syntax, semantics, sociolinguistics, and second-language acquisition. Three lecture hours a week for one semester. Prerequisite: Spanish 327G.

### **SPN 346. Practical Phonetics.**

Recommended for Spanish majors, especially for those preparing to teach. A thorough review of Spanish pronunciation, phonetics, and oral reading. Three lecture hours a week for one semester. Prerequisite: Spanish 327G.

### **SPN 347L. Linguistics in Translation.**

Conducted in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Spanish. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **Topic 1: Language, Culture, and Society in Latin America.**

### **SPN 349. Literature in Translation.**

Conducted in English. Three lecture hours a week for one semester. May not be counted toward fulfillment of the foreign language requirement for any bachelor's degree. May not be counted toward a major in Spanish. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **SPN 350. Studies in Hispanic Life and Culture.**

Sequel to Spanish 322K and 328, approaching in a more specialized way the study of important currents in Hispanic civilization. Three lecture hours a week for one semester. Spanish 350 and 350K may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 4: Indigenous Voices in Latin American Literature.** Same as Latin American Studies 370S (Topic 17: Indigenous Voices in Latin American Literature). Prerequisite: Spanish 322K or 328.

**Topic 6: Tracking Cultures: Literary and Cultural Points of Contact.** Prerequisite: Upper-division standing and consent of instructor.

**Topic 7: Tracking Cultures: Cultural Itineraries in Spain and Morocco.** Prerequisite: Upper-division standing and consent of instructor.

**Topic 8: Cultures in Contact in Medieval Spain.** Jewish Studies 361 (Topic: Cultures in Contact in Medieval Spain) and Spanish 350 (Topic 8) may not both be counted. Prerequisite: Spanish 322K or 328.

**Topic 9: History of the Spanish Civil War.** Prerequisite: Spanish 322K or 328.

**Topic 10: Business in Hispanic Life and Culture.** Same as Latin American Studies 370S (Topic 19: Business in Hispanic Life and Culture). Prerequisite: Spanish 322K or 328.

**Topic 11: Mexican and Mexican American Ballads.** Same as Latin American Studies 370S (Topic 20: Mexican and Mexican American Ballads) and Mexican American Studies 374 (Topic 29: Mexican and Mexican American Ballads). Examines the corrido genre in the nineteenth and twentieth centuries, with special focus on its pivotal role in the Mexican Revolution and in the collision between cultures in the border zone. Prerequisite: Spanish 322K or 328.

**Topic 12: The Imagined Andes.** Same as Latin American Studies 370S (Topic 22: The Imagined Andes). Overview of literature and culture of the Andean regions. Three lecture hours a week for one semester. Prerequisite: Spanish 322K or 328.

**Topic 13: Violence in Contemporary Mexican Culture.** Same as Latin American Studies 370S (Topic 23: Violence in Contemporary Mexican Culture) and Women's and Gender Studies 340 (Topic 20: Violence in Contemporary Mexican Culture). Studies the representation of violence in contemporary literary and cultural production in Mexico in order to understand social, political, and cultural implications of current violence in that country. Taught in Spanish. Prerequisite: Spanish 611D, 612, or 312L.

### **SPN 350K. Topics in Hispanic Film.**

A study of film from the Hispanic world, including Spain and Latin America. Three lecture hours a week for one semester. Spanish 350 and 350K may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 1: Gender Issues in Contemporary Latin American Cinema.** Same as Latin American Studies 370S (Topic 24: Gender Issues in Latin American Cinema). Studies Latin American cinema as a device of gender system formation and reinforcement, and as criticism of patriarchal hegemony; discusses questions related to sexuality depicted in Latin American films. Subjects covered include: maternity, prostitution, machismo, children's sexuality, homosexuality, heterosexuality, and gender violence in films from the 1930s to present. Conducted in Spanish. Three lecture hours a week for one semester. Only one of the following may be counted: Latin American Studies 370S (Topic 24), Spanish 350 (Topic: Gender in Contemporary Latin American Cinema), 350K (Topic 1).

**Topic 2: Violence in Spanish Film.** Focus on representations of violence in film from and about Spain since the 1920s to present. Includes the Spanish Civil War, torture, and other state-sanctioned violence; children and violence; violence against women; homophobic violence; terrorism; and ethnic and racist violence.

**Topic 3: Latin American Film and Culture.** Same as Latin American Studies 370S (Topic 25: Latin American Film and Culture). Overview of Latin American cinema from the silent era to present, with an emphasis on the last forty years. Subjects covered include: the development of the film industry (particularly in Argentina and Mexico in the 1930s and 1940s); the "New Wave" of Latin American cinema in the 1960s; and contemporary trends. Taught in Spanish. Three lecture hours a week for one semester. Only one of the following may be counted: Latin American Studies 370S (Topic 25), Spanish 350 (Topic: Latin American Film and Culture), 350K (Topic 3).

**Topic 4: Latin American Literature and Film.** Same as Latin American Studies 370S (Topic 26: Latin American Literature and Film). Studies, in a broad sense, the connections between Latin American cinema and literature, through extensive readings and in-class movie exhibitions. A number of renowned literary works by Latin American authors and their film versions will be analyzed with a comparative approach. Only one of the following may be counted: Latin American Studies 370S (Topic 26), Spanish 350



(Topic: Latin American Literature and Film), 350K (Topic 4), 352 (Topic: Literature and Cinema in Spanish America).

### **SPN 351. Don Quijote.**

Intensive analysis of Cervantes' novel. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 352. Topics in Spanish and Spanish American Literature.**

Major writers and works of Spanish and Spanish American literature. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Spain in 1492.** Spanish 350 (Topic: Spain in 1492) and 352 (Topic 1) may not both be counted. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 2: Literature of the Spanish Civil War.** Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 3: The Latin American Short Story.** Examination of the most representative Latin American authors as a course of study in the art of storytelling, literary history, individual poetics, and narrative theories. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 353. Introduction to Hispanic Sociolinguistics.**

Studies different aspects of Hispanic sociolinguistics, including concepts such as language contact and variation, bilingualism and multilingualism, the intersection of societal factors with linguistic expression, and linguistic identity. Three lecture hours a week for one semester. Prerequisite: Spanish 345L.

### **SPN 354. Topics in the Literatures of the United States.**

Study of literary texts written in Spanish in the United States, including but not limited to authors of Mexican, Puerto Rican, Cuban, and Dominican origin. Three lecture hours a week for one semester. Only one of the following may be counted: Latin American Studies 370S (Topic 6: Spanish-Language Literature of the Southwest), Mexican American Studies 374 (Topic 13: Spanish-Language Literature of the Southwest), Spanish 341K, 354. May be repeated for credit when the topics vary. Prerequisite: Spanish 327G (or 327).

### **SPN 362K. Spanish Drama and Poetry.**

Topics may focus on drama, poetry, a combination of the two, and themes expressed in one or both genres. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 364K. Spanish American Drama and Poetry.**

Main trends and principal writers, with emphasis on poetry. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 2: Contemporary Spanish American Poetry.** Same as Latin American Studies 370S (Topic 9: Contemporary Spanish American Poetry). Taught in Spanish.

### **SPN 364L. Applied Linguistics.**

Practical application of linguistic principles to the teaching of Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 327G and 345L.

### **SPN 365C. Conference Course in Hispanic Civilization.**

Conference course. Prerequisite: Spanish 612 or 312L; and written consent of the department chair.

### **SPN 365G. Conference Course in Hispanic Linguistics.**

Conference course. Prerequisite: Spanish 612 or 312L; and written consent of the department chair.

### **SPN 365K. Contemporary Spanish American Prose.**

Same as Latin American Studies 370S (Topic 10: Contemporary Spanish American Prose). Novels, short stories, and essays from different regions of Hispanic America. Taught in Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 365L. Conference Course in Hispanic Literature.**

Conference course. Prerequisite: Spanish 612 or 312L; and written consent of the department chair.

### **SPN 366K. Nineteenth-Century Spanish Literature.**

Literary trends, with intensive and extensive reading of representative works. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 367K. Syntax and Stylistics.**

Examination of Spanish syntax and style: the study of literary language and style, translation of idiomatic English, free composition, oral expression, rhetoric, and style. Three lecture hours a week for one semester. May be taught in English or Spanish, depending on the topic. Topics taught in English may not be counted toward fulfillment of the foreign language requirement for any degree; they may not be counted toward a major in Spanish without the consent of the chair of the Department of Spanish and Portuguese. May be repeated for credit when the topics vary. Prerequisite: Spanish 327G; additional prerequisites vary with the topic.

**Topic 1: Advanced Oral Expression for Teachers.** Restricted to students in the language teaching concentration. Conducted in Spanish.

**Topic 2: Comparative Structure of English and Spanish.** Same as Latin American Studies 370S (Topic 11: Comparative Structure of English and Spanish). Conducted in Spanish. Additional prerequisite: Spanish 327G, 345L and three additional semester hours of upper-division coursework in Spanish.

**Topic 3: Spanish Grammar.** Conducted in Spanish. Additional prerequisite: Spanish 345L and three additional semester hours of upper-division coursework in Spanish.

**Topic 4: Translation Principles and Practice.** Same as Latin American Studies 370S (Topic 12: Translation Principles and Practice). Conducted in Spanish. Additional prerequisite: Spanish 327G, 345L and three additional semester hours of upper-division coursework in Spanish.

**Topic 5: Interpretation Principles and Practice.** Same as Latin American Studies 370S (Topic 14: Interpretation Principles and Practice). Conducted in Spanish. Additional prerequisite: Spanish 327G, 345L and three additional semester hours of upper-division coursework in Spanish.

**Topic 6: Literary Translation: Analysis and Criticism.** Same as Latin American Studies 370S (Topic 15: Literary Translation: Analysis and Criticism). Conducted in Spanish. Additional prerequisite: Spanish 327G, 345L and three additional semester hours of upper-division coursework in Spanish.



**Topic 7: Spanish for Health Care Professionals.** Designed to build fluency in both spoken and written Spanish that will enable the health care professional to communicate effectively with monolingual patients, to attend conferences or classes in Spanish, and to explain medical literature to patients. Conducted in Spanish. Mexican American Studies 374 (Topic 30: Spanish for Health Care Professionals) and Spanish 367K (Topic 7) may not both be counted. Additional prerequisite: Spanish 345L and three additional semester hours of upper-division coursework in Spanish.

**Topic 8: Rhetoric and Composition for Native Speakers.** Writing and oral expression for use in academic and professional settings. Conducted in Spanish. Mexican American Studies 374 (Topic 31: Rhetoric and Composition for Native Speakers) and Spanish 367K (Topic 8) may not both be counted. Additional prerequisite: Spanish 345L and three additional semester hours of upper-division coursework in Spanish.

### **SPN 368L. Spanish Language Structure.**

Advanced treatment of the syntax and morphology of the Spanish language for Spanish majors concentrating in Hispanic linguistics. Three lecture hours a week for one semester. Spanish 367K (Topic: Structure of the Spanish Language) and 368L may not both be counted. Prerequisite: Spanish 345L.

### **SPN 372. Topics in Spanish Literature Since 1900.**

Intensive study of significant works and themes, and well as their literary and cultural contexts. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 373. Early Spanish Literature.**

Writers and texts from the medieval and/or the Renaissance period of Spanish literature. Three lecture hours a week for one semester. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 374K. Colonial Spanish American Literature.**

Main trends and principal writers of the colonial period in Spanish America. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 1: Writing the Conquest.** Same as Latin American Studies 370S (Topic 16: Writing the Conquest). The forging of Spanish-American civilization and many of its persistent dilemmas seen through the examination of an exuberant and original body of narrative texts. Only one of the following may be counted: Latin American Studies 370S (Topic 16), Spanish 350 (Topic: Writing the Conquest), 374K (Topic 1).

### **SPN 375. National Literatures of Spanish America.**

Selected representative works from the national literatures of Spanish America. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

### **SPN 376. Topics in Golden Age Literature.**

Critical study of significant Golden Age works. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Spanish 325K, 325L, 326K, or 326L.

**Topic 1: Golden Age Drama.**

**Topic 2: Prose and Drama of Golden Age Spain.** Only one of the following may be counted: Spanish 376 (Topic 2), 376 (Topic: Prose

and Drama of the Golden Age), 376 (Topic: Golden Age Prose and Drama).

**Topic 3: Cervantes.**

### **SPN 679H. Honors Tutorial Course.**

Supervised individual research on a literary, linguistic, or cultural problem, culminating in a written thesis of fifty to eighty typewritten pages. Conference course for two semesters. Prerequisite: For 679HA, upper-division standing, admission to the Spanish Honors Program, and consent of the honors adviser; for 679HB, Spanish 679HA.

## **UTeach-Liberal Arts**

### **UTeach-Liberal-Arts: UTL**

#### **Lower-Division Courses**

#### **UTL 101. Introduction to the Teaching Profession.**

Weekly seminar with a University faculty member plus a field experience in an area elementary school under the supervision of a cooperating teacher. Course readings and instruction complement the field experience. Seminar topics include basic classroom management, lesson design, assessment, technology, diversity, and special student populations. One class hour a week for one semester; at least ten hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: Successful admission into the UTeach-Liberal Arts program and consent of the UTeach adviser in the College of Liberal Arts.

#### **UTL 202. Introduction to Teaching in the Middle School.**

Weekly seminar with a University faculty member plus a field experience in an area middle school under the supervision of a cooperating teacher. Course readings and instruction complement field experience. Seminar topics include classroom management, lesson design, assessment, technology, diversity, special student populations, conferencing techniques, and school organization. Two class hours a week for one semester; at least twenty hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: UTeach-Liberal Arts 101 with a grade of at least B, and consent of the UTeach adviser in the College of Liberal Arts.

#### **UTL 303E. Teaching English in the High School.**

Weekly seminar with a University faculty member, plus field experience in an area high school under the supervision of a cooperating teacher. Course readings and instruction complement field experience. Seminar topics include state and national standards, curriculum design and implementation, the role of technology in education, and teaching strategies with a special focus on innovative strategies for teaching literature and writing. Three lecture hours a week for one semester; at least forty-five hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least B in each; concurrent enrollment in Curriculum and Instruction 370S (Topic 1: Advanced Methods in English, Language Arts, and Reading); and consent of the UTeach adviser in the College of Liberal Arts.

#### **UTL 303L. Teaching Languages Other Than English in the High School.**

Weekly seminar with a University faculty member, plus field experience in an area high school under the supervision of a cooperating teacher. Course readings and instruction complement the field experience. Seminar topics include state and national standards and

their implementation, teaching for proficiency, curriculum design, assessment, best practices, the instructional environment, and the role of technology in teaching languages other than English. Three lecture hours a week for one semester; at least forty-five hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least B in each; concurrent enrollment in Curriculum and Instruction 370S (Topic 5: Advanced Methods in Foreign Language); and consent of the UTeach adviser in the College of Liberal Arts.

### **UTL 303S. Teaching Social Studies in the High School.**

Weekly seminar with a University faculty member, plus field experience in an area high school under the supervision of a cooperating teacher. Course readings and instruction complement the field experience. Seminar topics include social studies topics, standards, curriculum design and implementation, teaching strategies, technology, and vertical and horizontal teaming in social studies. Three lecture hours a week for one semester; at least forty-five hours of fieldwork a semester are also required. Offered on the letter-grade basis only. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least B in each; concurrent enrollment in Curriculum and Instruction 370S (Topic 3: Advanced Methods in Social Studies); and consent of the UTeach adviser in the College of Liberal Arts.

### **UTL 304. Middle School Teaching for Postbaccalaureate Certification.**

Designed for college graduates seeking teacher certification. Students observe and teach in a middle school under the supervision of a mentor teacher, and participate in a weekly seminar. Seminar topics may include classroom management, lesson design, assessment, technology, diversity, special student populations, conference techniques, and professional development. Three lecture hours and two hours of fieldwork a week for one semester. May not be counted toward any degree. Prerequisite: Consent of the UTeach adviser in the College of Liberal Arts.

## **Upper-Division Courses**

### **UTL 320. Topics in Teaching the Liberal Arts.**

Introduction to various topics related to middle grades, secondary, and all-level teaching certification. Topics may include history, social studies, English language arts, and languages other than English. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Consent of the UTeach adviser in the College of Liberal Arts.

### **UTL 640. Teaching in Secondary Schools.**

Restricted to students entering the professional development sequence of the UTeach-Liberal Arts program. Course readings and instruction complement the field experience. Seminar topics include theoretical foundations for subject-specific methods, state and national standards and their implementation, teaching for proficiency, curriculum design, assessment, best practices, the instructional environment, and the role of technology in teaching. The equivalent of six lecture hours and four fieldwork hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: UTeach-Liberal Arts 101 and 202 with a grade of at least B in each, and consent of the UTeach adviser in the College of Liberal Arts.

### **UTL 341R. Overcoming Reading Difficulties.**

Restricted to UTeach-Liberal Arts students. Subjects may include the basic terminology related to special needs students, recognizing differences in learning disabilities, evaluating teaching methods and materials, and teaching strategies that address the needs of special

needs students, with a special focus on reading strategies. Three lecture hours a week for one semester. Rhetoric and Writing 379C (Topic: Overcoming Reading Difficulties) and UTeach-Liberal Arts 341R may not both be counted. Offered on the letter-grade basis only. Prerequisite: Applied Learning and Development 322 and consent of instructor.

### **UTL 360. Problems and Principles of Secondary Education.**

Restricted to students in the final student teaching semester of the UTeach-Liberal Arts program. Draws upon resources found in the directed-teaching environment; considers problems and issues in four broad areas: students in the school, the teacher's professional responsibilities, curriculum understandings, and administrative and organizational problems. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Concurrent enrollment in UTeach-Liberal Arts 670, and consent of the UTeach adviser in the College of Liberal Arts.

### **UTL 670. Directed Teaching in Secondary Schools.**

Restricted to students in the final student teaching semester of the UTeach-Liberal Arts program. Observation and teaching in secondary school classrooms as well as an exploration of other roles of the secondary school teacher, under the joint supervision of University and public school personnel. The equivalent of two lecture hours and forty fieldwork hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Concurrent enrollment in UTeach-Liberal Arts 360, and consent of the UTeach adviser in the College of Liberal Arts.

# **Center for Women's and Gender Studies**

## **Women's and Gender Studies: WGS**

### **Lower-Division Courses**

#### **WGS 301. Introductory Topics in Women's and Gender Studies.**

Three lecture hours a week for one semester, or as required for the topic. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: Introduction to Child Psychology.** General introduction to physical, social, and cognitive development from conception onward. Prerequisite: Psychology 301 with a grade of at least C.

**Topic 4: Family Relationships.** Same as Human Development and Family Sciences 304. The process of family interaction over the life cycle. Application of research findings to the understanding of relationships.

**Topic 5: Child Development.** Same as Human Development and Family Sciences 313. Motor, language, cognitive, social, and emotional development in the family context. Only one of the following may be counted: Human Development and Family Sciences 313, 313H, Women's and Gender Studies 301 (Topic 5). Prerequisite: Psychology 301 with grade of at least C-, and credit or registration for Human Development and Family Sciences 113L.

**Topic 6: Ethnicity and Gender: La Chicana.** Same as Mexican American Studies 319 (Topic 1: Ethnicity and Gender: La Chicana) and Sociology 308D.

**Topic 7: Women's Reproductive Health for Nonscience**

**Majors.** Same as Nursing 307 (Topic 1: Women's Reproductive Health for Nonscience Majors) and Sociology 308 (Topic 2: Women's Reproductive Health for Nonscience Majors). Overview of contemporary women's reproductive health issues, with emphasis on historical, physiological, psychosocial, and cultural influences that affect the reproductive health of women during adolescence, the childbearing years, and midlife. Only one of the following may be counted: Pharmacy 318W, Nursing 307 (Topic 1), Sociology 308 (Topic 2), Women's and Gender Studies 301 (Topic 7). Prerequisite: One year of high school biology, or Biology 301L or 309D or the equivalent.

**Topic 11: United States Women, Sexuality, and Gender to 1865.**

Same as History 317L (Topic 5: United States Women, Sexuality, and Gender to 1865). Partially fulfills legislative requirement for American history.

**Topic 12: Gay and Lesbian Literature and Culture.** Same as English 314V (Topic 4: Gay and Lesbian Literature and Culture).

Prerequisite: English 603A, Rhetoric and Writing 306, 306Q, or Tutorial Course 603A.

**Topic 1: Sociology of Gender.** Same as Sociology 333K.

Inequality between the sexes; men's and women's changing roles in society. Prerequisite: Upper-division standing.

**WGS 323. Introduction to Women's and Gender Studies in the Natural Sciences.**

Examination of gender constructs and male and female roles and differences and similarities, using approaches from the natural sciences. Three lecture hours a week for one semester, or as required for the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: Human Physical Growth and Development.****WGS 324. Introduction to Women's and Gender Studies in Communication.**

Multidisciplinary course examining issues of women, gender, and sexuality in media industries, texts, and audiences. Three lecture hours a week for one semester, or as required for the topic. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Gender and Communication.** Prerequisite: Upper-division standing.

**Topic 2: Women and Media Culture.** Introduction to the study of women's relations to media culture. Three lecture hours and two and one-half screening hours a week for one semester. Prerequisite: For radio-television-film majors: upper-division standing and the following coursework, with a grade of at least C in each course: Radio-Television-Film 305, either 314 or 316, and six additional semester hours of lower-division coursework in radio-television-film; for others, upper-division standing and consent of instructor.

**WGS 305. Introduction to Women's and Gender Studies.**

Introduction to the role of gender identity and representation in key social institutions and processes, including borders, displacements, and diasporas. Analysis of the social narratives of gender, race, and sexuality. Three lecture hours a week for one semester. Women's and Gender Studies 301 (Topic: Introduction to Women's and Gender Studies) and 305 may not both be counted.

**WGS 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Women's and Gender Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Women's and Gender Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses****WGS 321. Introduction to Women's and Gender Studies in the Humanities.**

Multidisciplinary course examining the creative work of women and the image of women in history and art. Topics in addition to the following may be offered; these are listed in the Course Schedule. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 4: Women and Literature: European Tradition.** Same as Scandinavian 323 (Topic 3: Women and Literature: European Tradition). Prerequisite: Upper-division standing.

**WGS 322. Introduction to Women's and Gender Studies in the Social Sciences.**

Multidisciplinary course using approaches from the social sciences to examine gender constructs and male/female roles. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**WGS 125. Special Topics in Women's and Gender Studies.**

Analysis of special topics in women's and gender studies through reading, discussion, and lectures. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**WGS 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Women's and Gender Studies.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Center for Women's and Gender Studies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**WGS 340, 440. Cross-Cultural Topics in Women's and Gender Studies.**

Women's experiences in different cultures. Three or four lecture hours a week for one semester. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 2: Women and Family in Asia.** Women's and Gender Studies 340 (Topic 2) is same as Asian Studies 372 (Topic 5: Women and Family in Asia). Prerequisite: Upper-division standing or consent of instructor.

**Topic 3: African American Family.** Women's and Gender Studies 340 (Topic 3) is same as African and African Diaspora Studies 374



(Topic 1: African American Family) and Social Work 360K (Topic 2: African American Family).

**Topic 5: German Women Filmmakers.** Women's and Gender Studies 340 (Topic 5) is same as Germanic Civilization 361E (Topic 5: German Women Filmmakers). Only one of the following may be counted: English 322 (Topic 14: German Women Filmmakers), European Studies 361 (Topic 15: German Women Filmmakers), Germanic Civilization 361E (Topic 5), Women's and Gender Studies 340 (Topic 5). Prerequisite: Upper-division standing.

**Topic 8: Women in Asian Societies.** Women's and Gender Studies 340 (Topic 8) is same as Asian Studies 361 (Topic 14: Women in Asian Societies) and History 350L (Topic 25: Women in Asian Societies). Prerequisite: Upper-division standing.

**Topic 9: Black Women in America.** Women's and Gender Studies 340 (Topic 9) is same as African and African Diaspora Studies 374D (Topic 9: Black Women in America) and History 350R (Topic 17: Black Women in America). Uses primary sources, historical monographs, and essays to provide a chronological and thematic overview of the experiences of black women in America from their African roots to the circumstances they face in the present era. Only one of the following may be counted: African and African Diaspora Studies 374D (Topic 9) History 350L (Topic: Black Women in America), 350R (Topic 17), Women's and Gender Studies 340 (Topic 9). Partially fulfills legislative requirement for American History. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 10: Iranian Women Writers.** Women's and Gender Studies 340 (Topic 10) is same as Middle Eastern Languages and Cultures 321 (Topic 11: Iranian Women Writers) and Middle Eastern Studies 342 (Topic 11: Iranian Women Writers). Only one of the following may be counted: Middle Eastern Languages and Cultures 321 (Topic 11), Middle Eastern Studies 324K (Topic 1: Iranian Women Writers), 342 (Topic 11), Persian 361 (Topic 3: Iranian Women Writers), WGS 340 (Topic 10). Prerequisite: Upper-division standing.

**Topic 11: Veiling in the Muslim World.** Women's and Gender Studies 340 (Topic 11) is same as Asian Studies 372 (Topic 14: Veiling in the Muslim World), Islamic Studies 372 (Topic 2: Veiling in the Muslim World), and Religious Studies 358 (Topic 5: Veiling in the Muslim World). Only one of the following may be counted: Asian Studies 372 (Topic 14), Islamic Studies 372 (Topic 2), Middle Eastern Studies 322K (Topic 17: Veiling in the Muslim World), Religious Studies 358 (Topic 5), Women's and Gender Studies 340 (Topic 11). Prerequisite: Upper-division standing.

**Topic 12: Women in Modern Japanese Fiction.** Women's and Gender Studies 340 (Topic 12) is same as Asian Studies 372 (Topic 17: Women in Modern Japanese Fiction). Prerequisite: Upper-division standing or consent of instructor.

**Topic 13: Law and Society in Early Modern Europe.** Women's and Gender Studies 340 (Topic 13) is same as European Studies 346 (Topic 4: Law and Society in Early Modern Europe) and History 350L (Topic 57: Law and Society in Early Modern Europe). Research seminar on how historians have explored the significance of law, criminal and civil, in the lives of early modern Europeans. Topics include infanticide, fornication, drunkenness, theft, debt, slander, and family disputes. Only one of the following may be counted: European Studies 346 (Topic 4), 361 (Topic: Law and Society in Early Modern Europe), History 350L (Topic 57), Women's and Gender Studies 340 (Topic 13). Prerequisite: Upper-division standing.

**Topic 14: Self-Revelation in Women's Writing.** Women's and Gender Studies 340 (Topic 14) is same as African and African Diaspora Studies 374 (Topic 26: Self-Revelation in Women's Writing), Comparative Literature 323 (Topic 4: Self-Revelation in

Women's Writing), and Middle Eastern Studies 342 (Topic 19: Self-Revelation in Women's Writing). Only one of the following may be counted: African and African Diaspora Studies 374 (Topic 26), Comparative Literature 323 (Topic 4), English 376L (Topic 9: Self-Revelation in Women's Writing), Middle Eastern Studies 322K (Topic 26: Self-Revelation in Women's Writing), 342 (Topic 19), Persian 361 (Topic: Self-Revelation in Women's Writing). Prerequisite: Upper-division standing.

**Topic 17: Italian Women Writers.** Women's and Gender Studies 340 (Topic 17) is same as Italian Civilization 349 (Topic 5: Italian Women Writers). Only one of the following may be counted: English 322 (Topic 38: Italian Women Writers), Italian Civilization 349 (Topic 5), Women's and Gender Studies 340 (Topic 17). Prerequisite: Upper-division standing.

**Topic 18: Women and Gender in China.** Women's and Gender Studies 340 (Topic 18) is same as Asian Studies 372 (Topic 21: Women and Gender in China) and History 350L (Topic 46: Women and Gender in China). Prerequisite: Upper-division standing.

**Topic 19: Contemporary India.** Exploration of urban and rural inequality through classic and contemporary novels, ethnographies, and films that highlight gender relations. Prerequisite: Upper-division standing.

**Topic 20: Violence in Contemporary Mexican Culture.** Women's and Gender Studies 340 (Topic 20) is same as Latin American Studies 370S (Topic 23: Violence in Contemporary Mexican Culture) and Spanish 350 (Topic 13: Violence in Contemporary Mexican Culture). Studies the representation of violence in contemporary literary and cultural production in Mexico in order to understand social, political, and cultural implications of current violence in that country. Taught in Spanish. Three lecture hours a week for one semester. Prerequisite: Spanish 611D, 612, or 312L.

**Topic 21: Minorities and the Media.** Discussion of issues concerning minority or nondominant groups in the United States. Survey of minority communication problems, including alienation; fragmentation; media and Internet access; and criticism and feedback for minority groups based on racial/ethnic background, age, sex, disability, social or economic class, and sexual orientation. Only one of the following may be counted: Journalism 340C (Topic 1: Mass Media and Minorities), 341H, Latin American Studies 322 (Topic 10: Minorities and the Media), Mexican American Studies 374 (Topic 22: Minorities and the Media), Urban Studies 354 (Topic: Minorities and the Media), Women's and Gender Studies 340 (Topic 21). Prerequisite: Upper-division standing.

**Topic 22: Muslim Women: Past and Present I.** Prerequisite: Upper-division standing.

**Topic 23: Muslim Women: Past and Present II.** Prerequisite: Upper-division standing.

**Topic 24: Nationalism and Gender in South Asia.** Women's and Gender Studies 340 (Topic 24) is same as Anthropology 324L (Topic 36: Nationalism and Gender in South Asia) and Asian Studies 361 (Topic 26: Nationalism and Gender in South Asia). Explores why nationalist movements often make the reform of women's roles central to their political projects.

**Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures.** Women's and Gender Studies 340 (Topic 25) is same as Anthropology 324L (Topic 40: Gender, Sexuality, and the Family in Indian Religions and Cultures), Asian Studies 372 (Topic 25: Gender, Sexuality, and the Family in Indian Religions and Cultures), and Religious Studies 341 (Topic 3: Gender, Sexuality, and the Family in Indian Religions and A comprehensive historical overview of gender issues as they are represented in the textual traditions of South Asia.

**Topic 26: American Popular Culture, 1682-Present.** Women's and Gender Studies 340 (Topic 26) is same as American Studies



370 (Topic 35: American Popular Culture, 1682-Present) and History 350R (Topic 19: American Popular Culture, 1682-Present). Explores the evolution of American popular culture and its relationship to national consolidation, and at times, disunion, over the last 330 years. Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

### **WGS 345. Topics in Women's and Gender Studies.**

Three lecture hours a week for one semester, or as required for the topic. Some topics partially fulfill legislative requirement for American history. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

#### **Topic 1: Child Development.**

**Topic 2: The Family.** Family history and origins; comparative family systems; the American family; social antecedents of family structure and process; family formation and dissolution; family and society.

**Topic 3: Women in Sickness and Health.** Same as History 350R (Topic 18: Women in Sickness and Health). Explores medical and biological views throughout the nineteenth and twentieth centuries of women and women's health, the social context of those views, the development of medical practices, and the treatment of illness and debility. Only one of the following may be counted: History 350L (Topic: Women in Sickness and Health), 350R (Topic 18), Women's and Gender Studies 345 (Topic 3). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 4: Guidance in Adult-Child Relationships.** Same as Human Development and Family Sciences 366. Theory and implementation of positive child and adult interactions, communication, and guidance strategies. Two lecture hours a week for one semester, and four laboratory hours a week to be arranged as a four-hour block between 8:30 AM and 4:45 PM, Monday through Thursday. Prerequisite: Human Development and Family Sciences 313 and 113L, and three semester hours of upper-division coursework in human development and family sciences, education, psychology, or sociology.

**Topic 5: Women and Sport.** Same as Kinesiology 352K (Topic 3: Women and Sport).

**Topic 6: Introduction to Developmental Psychology.** Physical, social, and cognitive development in humans. Psychology 333D and Women's and Gender Studies 345 (Topic 6) may not both be counted.

**Topic 7: Eighteenth-Century Women Writers.** Same as English 350M (Topic 1: Eighteenth-Century Women Writers). Women writers in the early 18th-century canon. Argues for a historical perspective that demonstrates the centrality of early 18th-century women writers to the western canon. Only one of the following may be counted: English 350M (Topic 1), 376L (Topic: Aphra Behn and 18th Century Women Writers), Women's and Gender Studies 345 (Topic 7). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 8: Gender-Based Discrimination.** Same as American Studies 370 (Topic 6: Gender-Based Discrimination) and Government 357M (Topic 1: Gender-Based Discrimination). Studies the substance of laws that relate to gender-based roles, and the participation of women in the legal process. Additional prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

**Topic 9: Women in Classical Antiquity.** Same as Classical Civilization 348 (Topic 7: Women in Classical Antiquity).

**Topic 10: Freudians and Feminisms.** Same as Germanic Civilization 362E (Topic 1: Freudians and Feminisms) and Philosophy 365 (Topic 1: Freudians and Feminisms). Prerequisite: For English majors, Rhetoric and Writing 306 and English 316K or their equivalents, and three additional semester hours of lower-division coursework in either English or rhetoric and writing; for others, upper-division standing.

**Topic 12: Family Policy Issues.** Same as Sociology 352M (Topic 5: Family Policy Issues). Consideration of liberal, conservative, and centrist views concerning the major family policy issues facing the United States and other advanced industrial societies.

**Topic 13: Isak Dinesen/Karen Blixen.** Same as Germanic Civilization 323E (Topic 1: Isak Dinesen/Karen Blixen) and Scandinavian 373 (Topic 6: Isak Dinesen/Karen Blixen).

Prerequisite: Upper-division standing.

**Topic 14: Social Dramas of Henrik Ibsen.** Same as English 322 (Topic 17: Social Dramas of Henrik Ibsen) and Scandinavian 323 (Topic 2: Social Dramas of Henrik Ibsen). Men and women in their public and private lives. Prerequisite: Upper-division standing.

**Topic 15: Contemporary Women Authors.** Same as African and African Diaspora Studies 374F (Topic 4: Contemporary Women Authors) and English 370W (Topic 2: Contemporary Women Authors). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 17: Language and Gender.** Same as English 364S. Linguistic, social, and political dimensions of gender-related speech differences. Only one of the following may be counted: English 346S, Linguistics 373 (Topic: Language and the Sexes), Women's and Gender Studies 345 (Topic 17). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 19: Social Development in Children.** Development of social behavior (for example, sex typing and aggression) and social relationships. Psychology 333R and Women's and Gender Studies 345 (Topic 19) may not both be counted. Prerequisite: Upper-division standing, Psychology 301 with a grade of at least C, Psychology 304 or 333D, and Psychology 418 or an equivalent statistics course with a grade of at least C.

**Topic 21: Male-Female Communication.** Same as Communication Studies 365K. Studies of speech patterns related to the concepts of male and female, including sexism in speaking, patterns of male and female speaking, patterns of listening to males and females, speech in courtship and family, speech and sexual discrimination in careers. Prerequisite: Upper-division standing.

**Topic 23: Sociology of Education.** Same as African and African Diaspora Studies 321L and Sociology 321L. Education as a societal institution, with emphasis on the United States educational system: how the system works; the effects of the system; recent changes. Prerequisite: Upper-division standing.

**Topic 25: Women and Socialism.** Same as Sociology 321K (Topic 4: Women and Socialism). The origins of socialism, its relationship to gender issues, and the role women have played in existing socialist states as revolutionaries and citizens. Prerequisite: Upper-division standing.

**Topic 26: American Dilemmas.** Examination of critical American social problems and how these problems are a natural outgrowth of the existing social structure. Prerequisite: Upper-division standing.

**Topic 27: Southern Cultures.** Same as American Studies 370 (Topic 40: Southern Cultures). Investigation of multiple, fluid, and diverse southern cultures through topics such as NASCAR, biscuits and cornbread, mega-churches, beauty pageants, jazz, country music, southern hip hop, migrant farm cultures, matzo ball soup with collards, the Trail of Tears, Gullah, Tara, Graceland, and more. Includes discussion of stereotypes and the individual truths

about women, men, and southern in the context of this discussion. Prerequisite: Upper-division standing.

**Topic 28: Cult Movies and Gender Issues.** Three lecture hours and two and one-half screening hours a week for one semester. Prerequisite: Upper-division standing.

**Topic 29: Witches, Workers, and Wives.** Same as European Studies 346 (Topic 3: Witches, Workers, and Wives) and History 343W. Explores the role of families and concepts of gender as expressed in key economic, social, political, and cultural patterns in early modern Europe. Prerequisite: Upper-division standing.

**Topic 30: Gay and Lesbian Literature and Culture.** Same as English 370W (Topic 8: Gay and Lesbian Literature and Culture). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 31: Gender and Slavery in the United States.** Same as African And African Diaspora Studies 372C (Topic 4: Gender and Slavery in the United States) and History 350R (Topic 14: Gender and Slavery in the United States). Examines the gendered experience of chattel slavery in the United States. Includes critical analysis of classic and contemporary texts, films, and songs that focus on slave labor, family, community, sexuality, and the economy. Only one of the following may be counted: African and African Diaspora Studies 372C (Topic 4), 374D (Topic: Gender and Slavery in the United States), History 350L (Topic: Gender and Slavery in the United States), 350R (Topic 14), Women's and Gender Studies 340 (Topic: Gender and Slavery in the United States), 345 (Topic 31). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 33: The History of Witchcraft.** Study of the prosecution of people, most of them women, for the crime of witchcraft in Europe and colonial America between 1450 and 1750. Prerequisite: Upper-division standing.

**Topic 34: Leadership in America.** Same as American Studies 370 (Topic 10: Leadership in America) and Government 370L (Topic 2: Leadership in America). Introduction to the concepts of leadership and the application of those concepts in public and political leadership. Additional prerequisite: Upper-division standing, six semester hours of lower-division coursework in government, a University grade point average of at least 3.50, and consent of department received prior to registering.

**Topic 35: Psychosocial Issues in Women's Health.** Psychosocial issues in women's physical and mental health. Includes a broad definition of women's health that considers traditional reproductive issues, disorders that are more common in women than in men, and the leading causes of death in women. Covers gender influences on health risk behaviors, and societal influences on women's health through a consideration of social norms and roles. Prerequisite: Upper-division standing.

**Topic 36: Feminist Media Theory.** Survey of basic theories related to the structure and process of film and video communication. Three lecture hours and two and one-half screening hours a week for one semester.

**Topic 37: Women in Postwar America.** Same as American Studies 370 (Topic 30: Women in Postwar America) and History 350R (Topic 8: Women in Postwar America). Only one of the following may be counted: American Studies 370 (Topic 30), History 350L (Topic 58: Women in Postwar America), 350R (Topic 8), Women's and Gender Studies 345 (Topic 37). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 38: History of Sexuality in America.** Same as History 350R (Topic 13: History of Sexuality in America). Only one of the following may be counted: History 350L (Topic 55: History of Sexuality in

America), 350R (Topic 13), Women's and Gender Studies 345 (Topic 38). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 39: Gender, Sexuality, and Migration.** Same as English 370W (Topic 9: Gender, Sexuality, and Migration). Only one of the following may be counted: Asian American Studies 320 (Topic: Gender, Sexuality, and Migration), English 370W (Topic 9), 370W (Topic: Cultures of Immigration and Dislocation), Women's and Gender Studies 345 (Topic 39). Prerequisite: Nine semester hours of coursework in English or rhetoric and writing.

**Topic 40: Virginia Woolf.** Same as English 349S (Topic 8: Virginia Woolf). Examines critical and fictional works of Virginia Woolf and the author's continuing legacy and influence. Explores the value and limitations of high modernism; English literary heritage and tradition; feminism; creative and critical definitions of gender and sexuality; intellectual activism, including Woolf's critiques of patriarchy, war, and fascism; and Woolf and imperialism and colonialism. Only one of the following may be counted: English 349S (Topic 8), 370W (Topic 10: Virginia Woolf), Women's and Gender Studies 345 (Topic 40). Prerequisite: Six semester hours of upper-division coursework in English.

**Topic 41: American Food.** Same as American Studies 370 (Topic 26: American Food). Studies diverse American food cultures from a humanities perspective, exploring connections between global, national, and local communities. Uses scholarship in the field of food studies as well as cookbooks, novels, poetry, photographs, songs, documentaries, and oral histories to investigate the past and present of American food communities. Prerequisite: Upper-division standing.

**Topic 42: Nature and Gender in America.** Same as American Studies 370 (Topic 27: Nature and Gender in America). Study of the connections between nature and gender in American national narratives. Explores how Americans of differing classes, races, genders, sexual orientations, and ages have shaped and experienced changing ideas of America, wilderness, domestication, and society over time and in different regions of the country. Prerequisite: Upper-division standing.

**Topic 43: Animals and American Culture.** Same as American Studies 370 (Topic 28: Animals and American Culture) and History 350R (Topic 9: Animals and American Culture). Explores the role of animals in American history, culture, and society. History 350L (Topic 60: Animals and American Culture) and Women's and Gender Studies 28, History 350L (Topic 60: Animals and American Culture), 350R (Topic 9), Women's and Gender Studies 345 (Topic 43). Partially fulfills legislative requirement for American history. Prerequisite: Upper-division standing and six semester hours of coursework in history.

**Topic 44: Women Radicals and Reformers.** Same as American Studies 370 (Topic 29: Women Radicals and Reformers). Traces traditions of women's radical activism and reform beginning with the Enlightenment and the American Revolution and continuing to the present, with concentration on the twentieth century. Prerequisite: Upper-division standing.

**Topic 45: Comparative Cultures of Beauty.** Same as American Studies 370 (Topic 24: Comparative Cultures of Beauty) and Asian American Studies 320 (Topic 2: Comparative Cultures of Beauty). Examines fashion and beauty as discourses, and cultural practices affecting identity, body politics, race, gender, sexuality, and class. Prerequisite: Upper-division standing.

**Topic 46: Toni Morrison.** Same as African and African Diaspora Studies 372E (Topic 1: Toni Morrison) and English 349S (Topic 5: Toni Morrison). An examination of select novels by the Nobel Laureate and Pulitzer Prize-winning novelist focuses on the

positional uniqueness that womanism shares with a predominant feminism, which surfaces in historicized familial relationships. Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 1), 374F (Topic: Toni Morrison), English 349S (Topic 5), Women's and Gender Studies 340 (Topic: Toni Morrison), 345 (Topic 46). Prerequisite: Six semester hours of upper-division coursework in English.

### **WGS 350. Feminist Theory.**

Feminist theory with selections from women's and gender studies scholars. Recommended feminist theory course for women's and gender studies majors. Three lecture hours a week for one semester. Women's and Gender Studies 322 (Topic 4: Feminist Theory) and 350 may not both be counted. Prerequisite: Upper-division standing and consent of instructor.

### **WGS 356. Introduction to Feminist Research Methods.**

Introduction to feminist research methods across a range of traditional disciplines. Designed to prepare students to analyze research within gender studies and to develop their own research skills. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **WGS 358Q. Supervised Research.**

Supervised individual research on an issue in women's and gender studies. Individual instruction. Prerequisite: Upper-division standing and written consent of the supervising faculty member; consent forms are available in the Center for Women's and Gender Studies.

### **WGS 360. Research and Thesis in Women's and Gender Studies.**

Individual project or paper to be completed under the direction of a women's and gender studies faculty member. Conference course. Prerequisite: Upper-division standing and written consent of the supervising faculty member; consent forms are available in the Center for Women's and Gender Studies.

### **WGS 679H. Honors Tutorial Course.**

Restricted to honors candidates majoring in women's and gender studies. Individual reading of selected works for one semester, followed in the second semester by the writing of an honors thesis. The equivalent of three lectures hours a week for two semesters. Prerequisite: For 679HA, twelve semester hours of coursework in women's and gender studies and consent of supervising faculty; for 679HB, Women's and Gender Studies 679HA.

### **WGS 379L. Internship in Women's and Gender Studies.**

Experience working in the community or for a nonprofit agency. Six to nine hours of work a week for one semester. Prerequisite: At least twelve semester hours of coursework in women's and gender studies and written consent of the supervising faculty member; consent forms are available in the Center for Women's and Gender Studies.

### **WGS 379S. Senior Seminar.**

Intensive study of selected topics in women's and gender studies. Three lecture hours a week for one semester. May not be repeated for credit. Prerequisite: Completion of at least ninety semester hours of coursework, including nine hours in women's and gender studies.

# College of Natural Sciences

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Linda A. Hicke, PhD, *Dean*

Dean Appling, PhD, *Associate Dean, Research and Facilities*

Reginald C. Baptiste, MD, *Associate Dean, Health Professions*

Sacha E. Kopp, PhD, *Associate Dean, Undergraduate Education*

Michael P. Marder, PhD, *Associate Dean,*

*Mathematics and Science Education*

Shelly Payne, PhD, *Associate Dean, Faculty Affairs*

Kay T. Thomas, MPA, *Associate Dean, External Relations*

Deborah Fuller, *Assistant Dean, Business Affairs and Administration*

Susan C. Harkins, EdD, *Assistant Dean, Texas Interdisciplinary Plan*

Michael W. Raney, PhD, *Assistant Dean,*

*Student Affairs and First-Year Initiatives*

Sarah L. Simmons, PhD, *Assistant Dean,*

*Honors, Research, and International Studies*

Catherine A. Stacy, PhD, *Assistant*

*Dean, Academic Records and Initiatives*

<http://cns.utexas.edu/>

## General Information

### Arts and Sciences Education

The academic program offered cooperatively by the College of Natural Sciences and the College of Liberal Arts provides what is sometimes referred to as a “liberal arts” or an “arts and sciences” education. No matter what area of knowledge a student intends to specialize in, the program of study will require courses in both colleges. The colleges work together to ensure that the individual interests and needs of the students pursuing an arts and sciences program are met.

Guidelines for developing a coherent plan of study are provided by major requirements, by sequential prerequisites, and by optional patterns of emphasis. Departmental majors, areas of specialization, and interdepartmental programs are designed to enable every student to study at least one field in depth. These programs are sufficiently broad in scope to allow students in the same major to develop quite different plans of study in pursuit of their individual interests and goals. Each student should choose courses that are intellectually challenging and that contribute to his or her long-term objectives.

Arts and sciences students are required to take a certain number of courses in the natural sciences, the social and behavioral sciences, and the humanities. Consequently, whatever their fields of study, they have the opportunity to learn something about the basic differences in the ways questions are raised and answered in several fields of inquiry, and about the techniques for validating the answers and putting the results to use. At the same time, they may gain some of the philosophical and historical perspectives that illuminate and give form to general or specialized knowledge and help to reveal its relevance.

Both teachers and students sometimes make the assumption that independent and creative study is exclusively for the gifted. In fact, the primary requirement is that the student be highly motivated, although he or she must also demonstrate ability. The departments that make up the two arts and sciences colleges encourage all qualified students to work independently in special honors courses and seminars and in conference, studio, or laboratory work. The student is free to define a major, to determine whether a given assignment will be an adventure or a chore, free to develop its latent possibilities or merely satisfy its explicit demands. True creativity presupposes more than a gift

for innovation; it requires an unceasing commitment to thinking and working at one's highest level.

As competence is gained in a chosen field, the mind should be progressively sharpened, disciplined, and enriched. The student who leaves arts and sciences studies with an enhanced understanding of self and humankind, of cultural and historical heritage, of the world and the universe, and of the moral values that make it possible to live a meaningful life, will have made the most of education, having gained something over and above the objective of vocational preparedness.

## Financial Assistance Available through the College

A number of scholarship funds established by individuals, foundations, and industrial or research organizations are available to students in the college. Awards are made for reasons ranging from academic promise to financial need. More information about scholarships is given at <http://cns.utexas.edu/honors/59-scholarships-fellowships>.

## Student Services

### Academic Advising

Academic advising is a responsibility shared by advisers and students. Advisers help students clarify their values and goals, assist with the selection of courses, and monitor and evaluate students' progress toward their degrees. Each student is assigned an academic adviser in his or her proposed field of study; students are expected to communicate with their advisers before registration each semester.

### Career Design Center

The Career Design Center is a multidisciplinary hub for students to explore the next phase of their professional or educational career. Whether going to graduate school, health professions school, or finding that perfect job, the Career Design Center is here to provide you with the guidance and coaching that you need.

### Study Abroad

Students are encouraged to incorporate an international experience into their course of study. In addition to the traditional study abroad programs, students may take advantage of programs specifically designed for science study, including faculty-led courses, Maymester courses, and research abroad. The Office for Honors, Research, and International Study provides information sessions, one-on-one advising, and resources for science students interested in these programs.

### Student Programs

The College of Natural Sciences offers additional programs to supplement the degree plans. Additional information is given at <http://cns.utexas.edu/>.

### Biology Scholars Program

The Biology Scholars Program (BSP) is designed to provide lower-division biology students with a broader understanding of the study of biology and a strong sense of community as they begin their academic careers. Throughout the two-year program, BSP provides academic support, resources for peer-led study, and community service opportunities. Each semester, BSP students take a specialized critical thinking seminar on topics that range from the study of biological



sciences to graduate and professional careers in biology. These classes emphasize working in small groups and help BSP students develop strong problem-solving and study skills.

## Emerging Scholars Program

The Emerging Scholars Program (ESP) is designed to help highly motivated mathematics, science, and engineering students toward continued academic success in essential first-year math and science courses. ESP students work closely with faculty members and with other high-achieving students in a supplemental workshop designed to enrich their course experience and intensify their understanding of the course material. The ESP experience is currently available in calculus and chemistry. Students are invited to participate during the spring of their senior year of high school on the basis of strong academic credentials and history of achievement in mathematics and sciences.

## Freshman Research Initiative

The Freshman Research Initiative introduces undergraduate students to the world of scientific research at the beginning of their academic careers by integrating a three-semester research experience into coursework required for the degree. All students begin with an introductory research methods course in the first semester, followed by two semesters of work on real, cutting-edge research projects in fields like biology, biochemistry, nanotechnology, molecular biology, astronomy, physics, mathematics, and computer science. After finishing the course sequence, interested students are assisted in joining faculty or other research laboratories for further work.

## Texas Interdisciplinary Plan

The Texas Interdisciplinary Plan (TIP) transforms the learning experience for its students by creating small academic communities that promote academic excellence and leadership. TIP offers a collection of selective academic programs that serve about nine hundred students each year, including TIP Scholars, TIP Fellows, Getting Ready for Advanced Degrees (grad), and the TIP Mentor Academy. While each program is unique, all incorporate assisted registration for courses, mentoring, tutoring, and academic and social connections. Admission criteria differ for each program. More information is available from the TIP office.

The Texas IP Fellows Certificate (p. 485) is described in Degrees and Programs.

## Undergraduate Research

One advantage that the University offers undergraduates is the opportunity to participate in state-of-the-art research with some of the world's most respected scientists. Each department in the College of Natural Sciences supports undergraduate research programs in which students may earn University credit. Students may also earn special departmental honors for exceptional research. The college holds an annual Undergraduate Research Forum to recognize and reward students who participate in research. Additional opportunities vary from department to department; information is available in the Office for Honors, Research, and International Study.

## UTeach-Natural Sciences

UTeach-Natural Sciences is an innovative teacher preparation program that allows students to pursue middle grades and secondary school teacher certification within a four-year mathematics, science, or computer science degree program. While learning the subject matter of their majors, students also learn how to teach. Upon completing

the program, students graduate with a bachelor's degree and are recommended for a middle grades or secondary school teaching certificate. The UTeach-Natural Sciences program invites students to explore their interest in teaching as early as the freshman year. Through courses taught by some of Texas's most respected secondary school math and science teachers, students learn quickly whether they are suited to the profession. More information about teacher certification requirements is given in the UTeach Teacher Certification (p. 486) of Degrees and Programs.

## Women in Natural Sciences

The Women in Natural Sciences (WINS) Honors Residential Program is designed to promote the involvement and success of women in the sciences. Students live together in an honors dormitory during their first year and participate in socially and educationally enriching activities. In their first semester they take an innovative small seminar class in which they are introduced to faculty members in their areas of interest. Through the seminar and a wide range of academic, cultural, and social events, WINS students are connected with other students and faculty members who share their interest in science.

# Admission and Registration

## Admission Policies of the College

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*, available at <http://registrar.utexas.edu/catalogs/>.

## The Entry-Level Major

All new freshman and transfer students are admitted into the College of Natural Sciences in an entry-level major. After completing a specified set of entry-level mathematics and science courses required for the degree with a grade of at least C- in each course, students are admitted to the major and option they plan to pursue.

## Admission-to-Major Requirements

### The Major in Computer Science

Several programs are available to undergraduates who wish to major in computer science. Each program involves an admission process in addition to the student's application for admission to the University. All students may apply to the University as entry-level computer science majors and later seek admission to one of the computer science programs as described in this chapter; those seeking admission to the Turing Scholars program may also apply to that program when they apply for admission to the University.

Admission requirements for the Bachelor of Arts with a major in computer science, the Bachelor of Science in Computer Science, option I, and the Integrated Program are given below. Those for the Bachelor of Science in Computer Science, option II, Turing Scholars honors, and option III, computer science honors, are given in Bachelor of Science in Computer Science (p. 500).

### Bachelor of Arts and Bachelor of Science in Computer Science, Option I and Option V

To apply for admission to either the Bachelor of Arts or the Bachelor of Science in Computer Science, option I or option V degree programs, the student must earn a grade of at least C in each of four entry-level courses: Computer Science 312 or 312H, 313K, 314 or 314H, and

Mathematics 408D or 408S or 408L. Students must complete at least three of these courses in residence at the University, and must earn a grade point average of at least 2.5 in the four entry-level courses taken in residence and a grade point average of at least 2.0 in all courses taken in residence. These requirements apply to entry-level computer science students seeking admission to one of these two computer science programs.

Students are evaluated after the end of each fall semester, spring semester, and summer session by the Department of Computer Science Admission Committee. Students should consult advisers in the College of Natural Sciences Department of Computer Science for information about admission to the major.

### **The Integrated Program in Computer Science**

The Integrated Program is a curriculum of undergraduate and graduate coursework that allows the student to earn the Bachelor of Science in Computer Science and the Master of Science in Computer Science degrees at the same time. The curriculum includes the same coursework as the traditional master's degree program, as well as the opportunity for research.

Students in the Integrated Program are expected to become leaders in the profession. Highly motivated students with the personal qualities and intellectual capacity to establish successful careers in higher education and industry are encouraged to apply.

Undergraduates typically follow option I, II, or III for their first three years, then enter the Integrated Program in their fourth year. Admission is granted only for the fall semester; January 2 is the application deadline for those who wish to begin the program the following fall. By the end of the spring semester in which they apply, students must have completed at least sixty semester hours of coursework, including Computer Science 345 or 345H, 429 or 429H, and 353 or 357 or 357H.

Admission is based on the applicant's grade point average, letters of recommendation, statement of purpose, and SAT Reasoning Test or ACT scores, as well as other relevant examples of academic ability and leadership. An applicant with a University grade point average of less than 3.50 is unlikely to be admitted. Admission may be restricted by the availability of instructional resources. Application materials and information about deadlines are published by the Department of Computer Science, available at <http://www.cs.utexas.edu/>.

Before beginning the fifth year, students in the Integrated Program must be admitted to the Graduate School. Application forms must be completed by January 2 of the student's fourth year. Before the application deadline, students must have completed the prescribed work common to all Bachelor of Science in Computer Science options. They must earn an acceptable score on the Graduate Record Examinations General Test (GRE) and must have their test scores reported to the University. Students usually take the GRE in the fall semester of their fourth year.

### **The Coordinated Program in Dietetics**

Freshman and transfer applicants to the University who plan to enter the Coordinated Program in Dietetics (CPD) should begin in the entry-level major in nutrition. When they have met the requirements described below, students may apply for admission to the CPD.

Prior to applying for admission to the CPD, students must complete at least sixty semester hours of the coursework required for the Bachelor of Science in Nutrition, option I, including Biology 325

or 325H, and 365S; Chemistry 369 or both 339K and 339L; and Nutrition 307, 107L, 312 or 312H, 112L or 312R, 315, and 326. A list of other recommended courses is available from the School of Human Ecology. Students must have a grade point average of at least 2.70 in coursework taken in residence at the University. Students should consult advisers in the School of Human Ecology for information about the application process and deadlines. Application materials are available from the school.

The number of applicants to the CPD may exceed the number that can be adequately instructed by the faculty and accommodated within available facilities. Admission decisions are based on the student's biology, chemistry, and nutrition grade point average, his or her University grade point average, and other factors. These factors include, but are not limited to, the difficulty of the student's coursework, work or volunteer experience, leadership, commitment to the profession of dietetics, and personal interview. Students whose applications are denied may reapply.

### **The Bachelor of Science in Environmental Science**

Students must be admitted to the Bachelor of Science in Environmental Science degree program; they may apply for admission after completing the following requirements:

The student must earn a grade of at least C- in Biology 311C, Chemistry 301, Mathematics 408C or 408N; and a grade of at least B- in Geological Sciences 401 or 303. To be competitive for admission, the student must have a grade point average of at least 2.75 in these four courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Natural Sciences Transitional Advising Center (TRAC) for information about the application process and application deadlines.

More information about the degree program is given in Bachelor of Science in Environmental Science (p. 479).

### **The Major in Public Health**

To apply for admission to the public health degree program, the student must have earned a grade of at least C- in Biology 311C and 311D or 315H; Chemistry 301 or 301H and 302 or 302H; and Mathematics 408C or 408N; and a grade of at least B- in Public Health 317. To be competitive for admission, the student must have a grade point average of at least 2.75 in these six courses.

Applications are evaluated after the end of each fall and spring semester. Students whose applications are denied may reapply through the supplemental admission process the following semester. Admission decisions are based on the student's grade point average in the basic sequence courses, his or her University grade point average, and other factors; these factors include, but are not limited to, the difficulty of the student's course load, course repetitions, and proven mathematical ability. Students should consult advisers in the College of Natural Sciences Transitional Advising Center (TRAC) for information about the application process and application deadlines.

Students who plan to follow option II, public health honors, must be admitted to the Dean's Scholars Honors Program (p. 481).

To apply for admission to option III, the student must already be admitted to option I. The option I student may apply for admission to option III upon completion of the fourth semester with a grade point average of at least 3.4. The eligible option I student may apply to option III and the Master of Public Health program following the admission schedule and policies of the School of Public Health at the University of Texas Health Sciences Center at Houston. The application is typically completed during the fifth semester of the Bachelor of Science in Public Health, Option I. Admission to option III requires approval by the School of Biological Sciences at the University of Texas at Austin and the School of Public Health at the University of Texas Health Sciences Center at Houston at the Austin Regional campus.

## The Major in Textiles and Apparel

Admission to the Field Experience Programs

All textiles and apparel students must complete a field experience. Admission to the field experience programs is subject to the approval of the faculty admission panel. Option I, apparel design and conservation, includes a three-semester-hour field experience, the Apparel Design or Conservation Internship Program, offered as Textiles and Apparel 352D; students usually complete the internship during the senior year. The student must apply for admission to the internship program the semester before he or she plans to enter it. Application forms are available from the School of Human Ecology. Before they apply, students must complete the following courses with a grade of at least C- in each: Textiles and Apparel 205, 105L, 212K, 212L, 316L, 219C, 119L, 126, 226L, 164K (Topic 1: *Flat Pattern*), and 264L (Topic 1: *Flat Pattern*).

Option II, retail merchandising, includes a nine-semester-hour field experience program, the Retail Merchandising Internship Program, offered as Textiles and Apparel 315K, 352M, and 355P; students normally complete the internship during the senior year. The student must apply for admission to the program the semester before he or she plans to enter it; materials, information about deadlines, and directions for application are available from the School of Human Ecology. Before they apply, students must complete the following courses with a grade of at least C- in each: Textiles and Apparel 205, 105L, 212K, 212L, 316Q, 219C, 119L, and 376; Marketing 320F or Advertising 318J; Accounting 310F; Mathematics 408C, 408N, or the equivalent; Mathematics 316, Statistics and Scientific Computation 302, 303, 304, 305, or 306 or Educational Psychology 371; and Communication Studies 306M. Before beginning the internship, students must successfully complete competitive interviews with representatives from participating retail establishments.

## Academic Policies and Procedures

### Academic Standards

### Calculus Placement

Calculus is a required course for all natural sciences degrees. To enroll in a calculus course in the college, students must first take the mathematics placement exam. Scores necessary for placement into specific mathematics and statistics courses are posted by the Student

Division at <http://cns.utexas.edu/academics/college-readiness/>. More information about scores and course placement is available from academic advisers.

## Repetition of a Course

No student may enroll in any course in the College of Natural Sciences more than twice, even if the course is needed to meet degree requirements, without first obtaining the written consent of his or her major adviser and of the department that offers the course; students in colleges other than the College of Natural Sciences need only departmental approval. A symbol of Q or W counts as an enrollment unless it has been approved by the dean's office for nonacademic reasons.

A student in the College of Natural Sciences may not repeat any course in which he or she has earned a grade of C- or better.

Departments in the college may have additional requirements for students who repeat courses.

## Concurrent Enrollment

Concurrent enrollment is enrollment simultaneously at the University and at another educational institution or in University Extension. Math and science courses may not be taken concurrently during fall and spring semesters and will not be counted toward a degree unless they are specifically approved in advance by the College of Natural Sciences. The college permits concurrent enrollment during summers without prior approval and during fall and spring semesters with certain restrictions. Students must see their academic advisers to petition for approval. No more than 30 percent of the semester hours required for any degree in the college may be completed online with University Extension.

## Undergraduates in a Graduate Course

The College of Natural Sciences encourages undergraduates who excel academically and would benefit from further challenges to enroll in graduate courses. With permission, undergraduates may count graduate courses toward their undergraduate degrees or may reserve them for graduate credit. To enroll in a graduate course, undergraduates must meet the University's eligibility requirements and must receive permission from the course instructor, the graduate adviser for the field in which the course is offered, and the college. Undergraduates reserving courses for graduate credit must also receive permission from the graduate dean. More information is given in Coursework in the Graduate School and the School of Law (p. 17).

## Petitions for Degree Requirements

Petitions for exceptions to degree requirements, other than the University-wide core curriculum, are handled through an online petition system. Academic advisers initiate petitions on the student's behalf and route them through departmental faculty advisers. The most common reason for petitioning is to request the substitution of transfer coursework for a specific degree requirement. Final decisions on all petitions are made by the dean's office. Degree requirements are very rarely waived outright.

## Honors

Information relating to University-wide Honors (p. 17) can be found in *General Information* available at <http://registrar.utexas.edu/catalogs/>. In addition, the College of Natural Sciences encourages academic excellence through programs such as the Dean's Scholars Honors

Program and Turing Scholars in Computer Science. Students may also graduate with departmental honors as described below and may earn membership in one or more of the honorary scholastic societies open to undergraduates.

## Graduation with University Honors

The University recognizes no more than the top 20 per cent of each college's graduating class as graduating with University Honors. To be eligible, an undergraduate must have completed at least sixty semester hours of coursework in residence at the University. Graduation with University Honors is based on the average of all grades earned in courses taken in residence at the University, whether the courses were passed, failed, or repeated. Courses taken pass/fail are counted in the sixty-hour minimum, but only letter grades (including *F* in pass/fail courses) are used to determine the grade point average.

Detailed requirements for graduation from the College of Natural Sciences with University Honors are given in *General Information*.

## Dean's Scholars Honors Program

The Dean's Scholars Honors Program is a comprehensive honors degree program for highly motivated and talented students. The key features of the program are a first-semester research methods course; a breadth requirement, usually completed during the first four semesters, that exposes students to various forms of scientific inquiry; and at least two semesters of supervised research and writing that culminate in an honors thesis. Students in good standing in the Dean's Scholars Honors Program may follow the honors option for the appropriate bachelor of science degree. The honors degree option is available in most fields in the college.

Application to the Dean's Scholars Honors Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available at <http://cns.utexas.edu/ds/> and in the program office. Students may enter the program as freshmen, as transfer students, or after they have enrolled at the University. In general, students who have completed more than fifty semester hours of college coursework are not considered for admission.

Factors in the admission decision are the student's high school and/or University grades, class rank, the rigor of the courses the student has taken, the quality of the required application essays, faculty recommendations, and the student's interest and aptitude in math and science as demonstrated by relevant extracurricular activities.

To remain in good standing in the Dean's Scholars Honors Program, students must maintain an in-residence grade point average of at least 3.25 after thirty hours in residence, of at least 3.40 after sixty hours in residence, and of at least 3.50 after ninety hours in residence. Students who fail to maintain the required grade point average will usually be dismissed from the program. Under special circumstances and at the discretion of the departmental honors adviser, a student may be allowed to continue under academic review.

## Turing Scholars in Computer Science

The Department of Computer Science offers a comprehensive honors degree program for highly motivated and talented students. The key features of the program are an intensive, accelerated freshman- and sophomore-year program; special Turing Scholars sections of many advanced computer science courses; a second-semester freshman-year course that introduces students to the research activities of

the department; and at least two semesters of supervised research and writing. Upon completion of both a sequence of Turing Scholars courses, approved by the program director, and an approved thesis, students graduate as Turing Scholars in Computer Science.

Students in the Turing Scholars program pursue the Bachelor of Science in Computer Science, option II. Application to the program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available in the Department of Computer Science and online. Students may enter the program either as freshmen or after they have enrolled at the University. Factors in the admission decision are the student's high school grades and class rank, the rigor of the courses the student has taken, the quality of the required application essays, and the student's interest and aptitude in math, science, and computing as demonstrated by extracurricular activities.

More information about the degree program is given later in this chapter.

## Honors In Advanced Human Development and Family Sciences Program

The Department of Human Development and Family Sciences offers a comprehensive honors degree program for highly motivated and talented students. The key features of the program are a core of small, select Human Development and Family Sciences courses that expose students to the research activities of the department, and at least two semesters of supervised research and writing that culminates in an honors thesis and presentation of student research in an approved public forum. Application to the Human Development and Family Sciences Honors Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available in the Department of Human Development and Family Sciences and online. Students may enter the program as freshmen, as transfer students, or after they have enrolled at the University. Factors in the admission decision are the student's high school and/or University grades, class rank, the rigor of the courses the student has taken, faculty recommendations, standardized test scores and the student's interest and aptitude in math and science as demonstrated by relevant extracurricular activities. More information about the degree program is given in the Degrees and Programs (p. 484) section.

## Honors In Advanced Nutritional Sciences Program

The Department of Nutritional Sciences offers a comprehensive honors degree program for highly motivated and talented students. The key features of the program are a core of select nutrition courses that expose students to the research activities of the department; and at least two semesters of supervised research and writing that culminates in an honors thesis and presentation of student research in an approved public forum. Application to the Honors in Advanced Nutritional Sciences Program is separate from, and in addition to, application to the University. Application materials and information about deadlines are available in the Department of Nutritional Sciences and online. Students may enter the program as freshmen, as transfer students, or after they have enrolled at the University. Factors in the admission decision are the student's high school and/or University grades, class rank, the rigor of the courses the student has taken, the quality of the required application essays, faculty recommendations, and the student's interest and aptitude in math and science as demonstrated by relevant extracurricular activities. More information



about the degree program is given in the Degrees and Programs (p. 484) section.

## College Honors Programs

### Departmental Honorary Societies

Several departments within the College of Natural Sciences sponsor honorary scholastic and professional societies. For information about eligibility criteria and activities, the student should consult the appropriate department office or the faculty adviser for the society.

The University sponsors chapters of the following national organizations of interest to students in natural sciences: Alpha Chi Sigma, professional chemical fraternity; Alpha Epsilon Delta, honorary fraternity for students who have completed at least three semesters of premedical coursework; Beta Beta Beta, honorary biological society; Omicron Nu, honorary human ecology society; Pi Mu Epsilon, honorary mathematical society; Sigma Pi Sigma, honorary physics society; Upsilon Pi Epsilon, honorary computer science society.

### Departmental Honors Programs

Most departments in the College of Natural Sciences offer departmental honors programs to their majors. Minimum requirements for the completion of all such programs include (1) a University grade point average of at least 3.00; (2) a three-semester-hour thesis or research project, or a reasonable equivalent, with a grade of at least B-; some programs may require a higher grade; (3) completion, with a grade point average of at least 3.50, of the coursework required for a major in the field in which the student seeks honors; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

The statement "Special Honors in (name of field)" appears on the transcript of each graduate certified as having completed the honors program.

### Astronomy Departmental Honors Program

Majors who plan to seek special departmental honors in astronomy should apply to the honors adviser for admission to the honors program no later than the beginning of the fourth year; application by the end of the third year is recommended. A University grade point average of at least 3.00 and a combined University grade point average in physics and astronomy of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) Astronomy 379H, *Honors Tutorial Course*, in which the student completes a supervised research project; the student may take a second semester of Astronomy 379H if necessary to complete the project; two semesters in this course may be counted toward the major requirement; (2) a written report and oral presentation on the research project, approved by the research supervisor and the honors adviser; (3) a University grade point average of at least 3.00 and a combined University grade point average in physics and astronomy of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

### Biochemistry Departmental Honors Program

Majors who plan to seek special departmental honors in biochemistry should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in biochemistry and chemistry of at least 3.50 are required for admission.

The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Biochemistry; (2) two semesters of Chemistry 379H, *Chemistry Honors Tutorial Course*; (3) a thesis and a presentation based on research; the research topic and the thesis must be approved by the supervising faculty member and the undergraduate faculty adviser; (4) a University grade point average of at least 3.00 and a grade point average in biochemistry and chemistry of at least 3.50; (5) completion at the University of at least sixty semester hours of coursework counted toward the degree; and (6) approval of the honors adviser.

### Biology Departmental Honors Program

Majors who plan to seek special departmental honors in biology should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in biology of at least 3.50 are required for admission. The requirements for graduation with special departmental honors, which are in addition to the requirements of the major, are (1) two semesters of Biology 379H, *Honors Tutorial Course*; (2) a thesis based on original research and approved by the supervising faculty member and the honors adviser; honors students in the human biology option must select both a thesis supervisor and a second reader, one of whom must be a tenure-track faculty member or senior lecturer in the School of Biological Sciences; (3) a University grade point average of at least 3.00 and a grade point average in biology of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

### Chemistry Departmental Honors Program

Majors who plan to seek special departmental honors in chemistry should apply to the honors adviser for admission to the honors program no later than the beginning of the senior year. A University grade point average of at least 3.00 and a grade point average in chemistry of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Chemistry; (2) two semesters of Chemistry 379H, *Chemistry Honors Tutorial Course*; (3) a thesis and a presentation based on research; the research topic and the thesis must be approved by the supervising faculty member and the undergraduate faculty adviser; (4) a University grade point average of at least 3.00 and a grade point average in chemistry of at least 3.50; (5) completion at the University of at least sixty semester hours of coursework counted toward the degree; and (6) approval of the honors adviser.

### Computer Science Departmental Honors Program

Students seeking special departmental honors must meet with a faculty adviser at least two semesters before they plan to graduate to discuss potential research topics and the requirements for receiving special departmental honors. The requirements for graduation with special departmental honors are (1) Computer Science 379H, *Computer Science Honors Thesis*, with a grade of at least B-; (2) a University grade point average of at least 3.00 and a grade point average in computer science of at least 3.50; (3) a thesis, written on the subject of the student's research and approved in comprehensive examination by a committee consisting of at least three faculty members, including the honors adviser; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

### **Human Development and Family Sciences Departmental Honors Program**

Majors who plan to seek special departmental honors in human development and family sciences should apply to the Departmental Honors Committee for admission to the honors program no later than the beginning of the senior year. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Human Development and Family Sciences; (2) Human Development and Family Sciences 379H, *Honors Tutorial Course*; (3) completion of an honors thesis and an accompanying presentation, both of which must be approved by a committee consisting of the research supervisor and another faculty member; (4) a University grade point average of at least 3.00, a grade point average in Human Development and Family Sciences 379H of at least 3.00, and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree and for honors; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

### **Human Ecology Departmental Honors Program**

Majors who plan to seek special departmental honors in human ecology must follow the requirements of the departmental honors program in human development and family sciences, nutrition, or textiles and apparel.

### **Mathematics Departmental Honors Program**

Majors who plan to seek special departmental honors in mathematics should apply to the honors adviser for admission to the honors program at least two semesters before their expected graduation. A University grade point average of at least 3.00 and a grade point average in mathematics of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) Mathematics 379H, *Honors Tutorial Course*; (2) a thesis on the subject of the student's research or project approved in comprehensive examination by a committee consisting of at least three faculty members; (3) a University grade point average of at least 3.00 and a grade point average in mathematics of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree. In order to fulfill the first requirement, students must meet the prerequisite of Mathematics 379H—Mathematics 365C, 367K, 373K, or 374G with a grade of at least A-, and another of these courses with a grade of at least B-; and consent of the honors adviser.

### **Nutrition Departmental Honors Program**

Majors who plan to seek special departmental honors in nutrition should apply to the Departmental Honors Committee for admission to the honors program no later than the beginning of the senior year. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Nutrition; (2) Nutrition 379H, *Honors Tutorial Course*; this course may be repeated once for credit; (3) completion of an honors thesis and an accompanying presentation, both of which must be approved by a committee consisting of the research supervisor and another faculty member; (4) a University grade point average of at least 3.00, a grade point average in Nutrition 379H of at least 3.00, and a grade point average of at least 3.50 in coursework in the School of Human Ecology

that is required for the degree and for honors; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

### **Physics Departmental Honors Program**

Majors who plan to seek special departmental honors in physics should apply to the honors adviser for admission to the honors program near the end of the third year. A University grade point average of at least 3.00 and a grade point average in physics of at least 3.50 are required for admission. The requirements for graduation with special departmental honors are (1) Physics 379H, *Honors Tutorial Course*; (2) a written honors thesis approved by faculty readers assigned by the department; (3) a University grade point average of at least 3.00 and a grade point average in physics of at least 3.50; and (4) completion at the University of at least sixty semester hours of coursework counted toward the degree.

### **Textiles and Apparel Departmental Honors Program**

Majors who plan to seek special departmental honors in textiles and apparel should apply to the Departmental Honors Committee for admission to the honors program no later than the beginning of the senior year. The requirements for admission are a University grade point average of at least 3.00 and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree. The requirements for graduation with special departmental honors are (1) all requirements for the degree of Bachelor of Science in Textiles and Apparel; (2) Textiles and Apparel 379H, *Honors Tutorial Course*; this course may be repeated once for credit; (3) completion of an honors thesis and an accompanying presentation, both of which must be approved by a committee consisting of the research supervisor and another faculty member; (4) a University grade point average of at least 3.00, a grade point average in Textiles and Apparel 379H of at least 3.00, and a grade point average of at least 3.50 in coursework in the School of Human Ecology that is required for the degree and for honors; and (5) completion at the University of at least sixty semester hours of coursework counted toward the degree.

## **Graduation**

### **Special Requirements of the College**

All students must fulfill the general requirements (p. 18) for graduation. Students in the College of Natural Sciences must also fulfill the following requirements.

1. The University requires that the student complete in residence at least sixty semester hours of the coursework counted toward the degree. For the Bachelor of Arts, Plan I, these sixty hours must include at least eighteen hours in the major. For all other degrees offered by the College of Natural Sciences, thirty of these sixty hours must be taken in the College of Natural Sciences or the College of Liberal Arts.
2. All University students must complete in residence at least twenty-four of the last thirty semester hours counted toward the degree. For students seeking the Bachelor of Science in Medical Laboratory Science, this rule applies to the academic work completed at the University.
3. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. Additional hours in the professional or major sequence in many cases are required by individual natural sciences degree programs.

4. A candidate for a degree must be registered in the College of Natural Sciences either in residence or in absentia the semester or summer session the degree is to be awarded. Graduation applications must be submitted no later than the date given in the academic calendar. The application and supplemental in absentia instructions are available via the college's academics Web page, <http://cns.utexas.edu/academics/>.

## Applying for Graduation

An electronic degree audit is created for each student each semester. The student should view the audit through IDA, the University's Interactive Degree Audit system. The degree audit tells the student the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill all these requirements. The student should speak with his or her assigned academic adviser before registering if in doubt about any requirement.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must file an online graduation application form via the academics section of the college's Web site, <http://cns.utexas.edu/academics/>. This should be done during the first week of classes, if possible, but in no event later than the deadline to apply for an undergraduate degree; this date is given in the official academic calendar. No degree will be conferred unless the graduation application form has been filed on time.

## Degrees and Programs

The College of Natural Sciences offers the Bachelor of Arts, Plan I, and several bachelor of science degrees. The requirements of the Bachelor of Arts, Plan I, begin in Bachelor of Arts, Plan I (p. 486). The Bachelor of Arts, Plan II, a broad liberal arts honors program for outstanding students, is described in Bachelor of Arts, Plan II (p. 309). Plan II emphasizes the humanities but also permits a concentration equivalent to a major in science.

The bachelor of science degrees and degree requirements are listed in College of Natural Sciences (p. 13).

A student may not earn more than one Bachelor of Arts degree or more than one Bachelor of Science in Environmental Science degree from the University. A student who holds a Bachelor of Arts degree from the university may earn a second major designation that will appear on the University transcript. Likewise, a student who holds a Bachelor of Science degree from the university may earn a second major option designation that will appear on the University transcript.

The title of a graduate's degree appears on his or her diploma, but the major does not. Both the degree and the major appear on the graduate's University transcript.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity (PED) courses and Kinesiology 119 may not be counted toward a degree in the College of Natural Sciences. However,

they are counted as courses for which the student is enrolled, and the grades are included in the grade point average.

## ROTC Courses

ROTC units are maintained on campus by the Departments of Air Force Science, Military Science, and Naval Science. Information about each program is available from the chair of the department.

Nine semester hours of designated University of Texas at Austin coursework in air force science, military science, or naval science may be counted toward any degree in the College of Natural Sciences.

## Courses Taken on the Pass/Fail Basis

No more than sixteen semester hours taken on the pass/fail basis may be counted toward the Bachelor of Arts, Plan I. In general, only electives may be taken on the pass/fail basis. Complete rules on registration on the pass/fail basis are given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

## Courses in a Single Field

No more than thirty-nine hours may be counted in any one field of study, including the major, unless major requirements state otherwise. No more than thirty-nine hours may be counted in any one college or school other than the College of Liberal Arts or the College of Natural Sciences.

## College Algebra

Algebra courses at the level of Mathematics 301 or the equivalent may not be counted toward a degree in the College of Natural Sciences.

## Transcript-Recognized Certificate Programs

Undergraduate certificate programs encourage students to explore academic areas that support and extend their degree plans. The following certificates require at least eighteen semester hours of coursework, some of which may also be used to fulfill degree requirements. Undergraduates who complete the certificate requirements in conjunction with their degree requirements or within one year after earning the degree will receive a certificate and recognition on their University transcript. A maximum of nine hours in the certificate program may be taken after completion of the undergraduate degree. At least half of the required coursework in the certificate program must be completed in residence at the University.

## Certificate in Computational Science and Engineering

Information relating to the Certificate in Computational Science and Engineering (p. 15) can be found in The University section.

## The Elements of Computing Program

The Elements of Computing Program, administered by the Department of Computer Science, is designed to support computational work in disciplines other than computer science and to provide students with skills in the use of computer applications. Any non-computer science major may take any elements of computing course for which he or she meets the prerequisite. No application process is required.



To earn the Elements of Computing Certificate, students must complete eighteen semester hours of coursework with a grade of at least C- in each course. The following courses are required:

- One core course: Computer Science 303E, *Elements of Computers and Programming*, or the equivalent
- Five of the following courses, including at least three upper-division courses:
  - Computer Science 301K, *Foundations of Logical Thought*
  - Computer Science 302, *Computer Fluency*
  - Computer Science 313E, *Elements of Software Design*
  - Computer Science 320N, *Topics in Computer Science for Nonmajors*
  - Computer Science 324E, *Elements of Graphics and Visualization*
  - Computer Science 326E, *Elements of Networking*
  - Computer Science 327E, *Elements of Databases*
  - Computer Science 329E, *Topics in Elements of Computing*

With the approval of the certificate program faculty committee, other appropriate courses may be counted toward the elective requirement.

## Certificate in Scientific Computation

The Certificate in Scientific Computation helps undergraduates equip themselves with the mathematical, statistical, and computer-based tools necessary to investigate complex systems in a variety of applications. It is designed to appeal to students across the University in science, engineering, economics, premedicine, sociology, and many other disciplines. The program is administered by the Division of Statistics and Scientific Computation. To be admitted, a student must be in good standing in an approved undergraduate degree program and must have earned a grade of at least C- in each certificate course he or she has completed. Students may apply for admission to the program at any point in their undergraduate study; they are encouraged to apply as early as possible so that they can be advised throughout the program.

The following coursework is required. Students must also complete Mathematics 408D or 408M as a prerequisite. No single course or topic may be used to meet more than one of these requirements.

1. Statistics and Scientific Computation 222
2. One course in linear algebra, discrete mathematics, or differential equations chosen from the following: Mathematics 340L, 341, 362M, 372K, Statistics and Scientific Computation 329C
3. Two courses in scientific computing, chosen from two of the following areas:
  - A. *Numerical methods*: Aerospace Engineering 311, Chemical Engineering 348, Computer Science 323E, 323H, 367, Mathematics 348, Petroleum and Geosystems Engineering 310, Statistics and Scientific Computation 335
  - B. *Statistical methods*: Biomedical Engineering 335, Electrical Engineering 351K, Mathematics 358K, 378K
  - C. *Other computing topics*: Computer Science 324E, 327E, 329E (approved topics), 377, Mathematics 346, 362M, 368K, 372K, 375T (approved topics), 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E
4. One of the following courses in applied computational science: Aerospace Engineering 347, Biology 321G, Biomedical Engineering 341, 342, 346, 377T (approved topics), Chemistry

368 (approved topics), Computer Science 324E, 329E (approved topics), Economics 363C, Electrical Engineering 379K (approved topics), Geological Sciences 325K, Mathematics 375T (approved topics), 374M, Physics 329

5. An independent research course: Statistics and Scientific Computation 479R

## Texas IP Certificate

The Texas Interdisciplinary Plan (Texas IP) Certificate allows students to pursue an integrated course of study with a focus on the development and application of critical thinking skills. The curriculum is designed to complement the student's major with an interdisciplinary sequence of courses that may encompass the humanities, the social sciences, the natural sciences, and the arts. Students have the opportunity to present an original work in a capstone seminar. Those who plan to pursue the certificate should apply to the program adviser for admission no later than the end of their sophomore year. More information about the Texas IP Certificate is given at <http://www.utexas.edu/tip/TexasIP/>.

Students must meet the following requirements:

1. *Critical Thinking Seminar*: One of the following courses: Liberal Arts 302, Philosophy 311, Natural Sciences 301C (Topic: *Research Methods*), 302, 311, Undergraduate Studies 303 (Topic: *Thinking About Thinking Across the Disciplines*)
2. *Critical Writing Seminar*: Rhetoric and Writing 309K or 309S. Selected courses in the Department of Rhetoric and Writing may be substituted on a petition basis
3. Three additional courses, including at least three semester hours of upper-division coursework, from an interdisciplinary topic area prescribed by the Texas Interdisciplinary Plan; or, with approval of the Texas IP Faculty Advisory Panel, a three-course interdisciplinary topic area designed by the student
4. *Senior Capstone Seminar*: Liberal Arts 371 or Natural Sciences 371

In the College of Liberal Arts, a student whose major includes a minor may use the Texas IP curriculum as the minor if he or she completes the Texas IP coursework and if the minor is not specified by the major department. Final approval of the Texas IP minor coursework rests with the College of Liberal Arts associate dean for academic affairs or the associate dean's authorized representative.

In the College of Natural Sciences, the Texas IP Certificate may be used to complement any major. Some certificate courses will also fulfill degree requirements established by the student's major department and given later in this section; however, some of the eighteen hours required for the certificate may be in addition to the number of hours required for the degree.

## Certificate in Textile Conservation

The Certificate in Textile Conservation helps undergraduates equip themselves with the fiber science, exhibition planning, textile conservation and museum management skills necessary to conserve textiles in various settings. It is designed to appeal to students across the University in science, history, information science, computational science, merchandising, fiber science and apparel design and many other disciplines. The program is administered by the Division of Textiles and Apparel in the School of Human Ecology. To be admitted, a student must be in good standing in an approved undergraduate



degree program and must have earned a grade of at least C- in each certificate course he or she has completed. Students may apply for admission to the program at any point in their undergraduate study; they are encouraged to apply as early as possible so that they can be advised throughout the program.

The following coursework is required.

1. Textiles and Apparel 205 and 105L
2. Textiles and Apparel 219C and 119L
3. Textiles and Apparel 325L
4. Textiles and Apparel 325M
5. Textiles and Apparel 355D
6. Textiles and Apparel 352C
7. Information Studies 304D or 304W
8. Information Studies 335W

## UTeach Teacher Certification

UTeach-Natural Sciences prepares students in the College of Natural Sciences and the Jackson School of Geosciences for single-field teacher certification in mathematics or computer science or for composite certification with biology, chemistry, geological sciences, or physics as the primary teaching field. Composite certification that includes engineering is also available through UTeach-Engineering, in collaboration with the Cockrell School of Engineering. Composite certification requires forty-eight semester hours of coursework, consisting of twenty-four hours in one science, twelve in a second science, and six each in two additional sciences.

Students can complete the courses for certification as electives within a standard bachelor's degree program; lists of the required content courses and additional certification requirements are available in the UTeach-Natural Sciences office. However, students are strongly encouraged to consider the teaching options in biology, chemistry, geological sciences, mathematics, nutrition, and physics. These incorporate not only the required coursework in the major but also the professional development courses, supporting courses, and courses in other sciences that are required for certification.

To graduate and be recommended for certification, the student must have a University grade point average of at least 2.50. He or she must have earned a grade of at least C- in each of the professional development courses and supporting courses listed below and must pass the final teaching portfolio review. Information about the portfolio review and additional certification requirements is available from the UTeach-Natural Sciences academic adviser.

Students must adhere to current certification requirements, even if they differ from those listed in a University catalog.

## Professional Development Sequence

All students seeking teacher certification must complete the following courses:

1. UTeach-Natural Sciences 101, *Secondary Teacher Education Preparation: STEP 1*
2. UTeach-Natural Sciences 110, *Secondary Teacher Education Preparation: STEP 2*
3. UTeach-Natural Sciences 170, *Student Teaching Seminar*

4. Curriculum and Instruction 650S, *Secondary School Teaching Practicum*
5. Curriculum and Instruction 365C, *Knowing and Learning in Math and Science*
6. Curriculum and Instruction 365D, *Classroom Interactions*
7. Curriculum and Instruction 365E, *Project-Based Instruction*

Students seeking middle grades certification must also complete the following courses. To be recommended for certification, the student must earn a grade of at least C- in each course.

Curriculum and Instruction 339E, *Secondary School Literacy across the Disciplines*,  
Educational Psychology 363M, Topic 3: *Adolescent Development*; or both Psychology 301, *Introduction to Psychology*, and Psychology 304, *Introduction to Child Psychology*

## Supporting Courses

Biology 337, (Topic 2: *Research Methods: UTeach*); Chemistry 368, (Topic 1: *Research Methods—UTeach*); or Physics 341, (Topic 7: *Research Methods: UTeach*)  
History 329U, *Perspectives on Science and Mathematics*, or  
Philosophy 329U, *Perspectives on Science and Mathematics*

Interested students are encouraged to start the program at any time during their undergraduate careers. Students must be considering a teaching career in middle grades or secondary school science, computer science, mathematics and/or engineering, and must meet grade point average requirements. Students who are interested in teaching earlier grades should consult the College of Education.

## Bachelor of Arts, Plan I

The requirements for the Bachelor of Arts under Plan I are designed to give each student flexibility in the selection of courses to meet individual needs.

A total of 120 semester hours is required. Thirty-six hours must be in upper-division courses. At least sixty hours, including twenty-one hours of upper-division coursework, must be completed in residence at the University; at least twenty-four of the last thirty hours must be completed in residence at the University. Provided residence rules are met, credit may be earned by examination, by extension, by correspondence (up to 30 percent of the hours required for the degree), or, with the approval of the dean, by work transferred from another institution. Up to sixteen semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

All students must complete the University's Core Curriculum (p. 22). The specific requirements for the Bachelor of Arts, Plan I, consist of prescribed work, major and minor requirements, and electives. In some cases, a course that fulfills one of these requirements may also be counted toward the core curriculum.

Courses in the major and minor may also be used to fulfill prescribed work requirements unless expressly prohibited. A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that

a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

The student must fulfill both the University general requirements (p. 18) for graduation and the requirements of the College of Natural Sciences (p. 483). University graduation requirements include a grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension) for which a grade or symbol other than Q, W, X, or CR is recorded; for the BA, Plan I, the student must also earn a grade point average of at least 2.00 in courses taken at the University and counted toward the major requirement. The student should also refer to the description of his or her major in the section "Majors and Minors" below, since some majors include higher minimum scholastic requirements.

More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

## Prescribed Work

1. *Writing*: Two courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. *Foreign language*: Four semesters or the equivalent in a single foreign language.  
The foreign language requirement is the attainment of a certain proficiency, as well as the completion of a specified number of courses; however, the courses taken to gain proficiency are not electives and may not be taken on the pass/fail basis. Any part of the requirement may be fulfilled by credit by examination.

To achieve proficiency in a foreign language as rapidly as possible, qualified students are urged to take intensive foreign language courses. Information about these courses is available from the departments that offer them.

Courses used to fulfill the foreign language requirement must be language courses; literature-in-translation courses, for example, may not be counted.

3. *Social science*: Three semester hours chosen from a list of approved courses, in addition to the course used to fulfill the social and behavioral sciences requirement of the core curriculum. The course(s) must be in a field of study taught in the College of Liberal Arts and must be in a different field of study from the course used to fulfill the social and behavioral sciences requirement of the core.

Courses on the approved list are primarily in anthropology, economics, geography, linguistics, psychology, and sociology, but not every course in these fields is approved. Courses that are approved to count toward any core curriculum area other than social and behavioral sciences may not be counted toward this requirement.

The list is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

4. *Mathematics*: Three semester hours in mathematics, excluding Mathematics 301, 316K, and 316L.

5. *Natural science*: Six semester hours in natural sciences, in addition to the courses counted toward the science and technology requirements of the core curriculum. Courses used to fulfill this requirement must be chosen from the fields of study listed below; no more than three hours may be in either the history of science or the philosophy of science.

To satisfy the mathematics and science and technology requirements of the core curriculum and the natural science requirement of the BA, Plan I, a student may count (1) no more than twelve hours in mathematics, computer science, and statistics and scientific computation combined; and (2) no more than nine hours in any single field of study.

- A. Astronomy
- B. Biology
- C. Chemistry
- D. Geological sciences
- E. Marine science
- F. Nutrition
- G. Physical science
- H. Physics
  - I. Mathematics (excluding Mathematics 301), computer science, statistics and scientific computation
  - J. Other alternative science courses approved by the dean
  - K. Approved alternative courses in history of science and philosophy of science

6. *Cultural expression, human experience, and thought*: Three semester hours chosen from a list of approved courses. The course(s) must be in a field of study taught in the College of Liberal Arts. A course counted toward any requirement of the core curriculum may not also be counted toward this requirement.

A list of approved courses is available each semester in the Student Division and at <http://www.utexas.edu/cola/student-affairs/Academic-Planning/Majors-and-Degrees/Course-Lists.php>.

## Electives

In addition to the core curriculum, prescribed work, and major and minor, the student must complete enough elective coursework to provide the 120 semester hours required for the degree. These 120 hours may include no more than twelve semester hour of Bible; nine hours of designated coursework in air force science, military science, or naval science; sixteen hours completed on the pass/fail basis; thirty-nine hours in any one field of study offered in the College of Liberal Arts or the College of Natural Sciences, unless major requirements state otherwise; and thirty-nine hours in any other single college or school of the University.

## Majors and Minors

### Major Requirements

The Bachelor of Arts, Plan I, requires the completion of all requirements for one major.

The number of semester hours required in the major varies with the field selected. Unless the requirements of the major state otherwise, a major consists of at least twenty-four but no more than thirty-nine semester hours, with at least fifteen hours in upper-division courses. Of these fifteen hours, six must be completed in residence. At least eighteen hours of coursework in the major, including six hours of upper-division coursework, must be completed in residence at the University.

## Minors

Students in most majors must also fulfill the requirements of a minor. The requirements of the minor are established by the major department and are given with the major requirements below. Additional restrictions may be imposed by the academic department(s) in which the student takes the courses used to fulfill the requirements of the minor; before planning to use a course to fulfill the minor requirement, the student should consult the department that offers the course.

## Astronomy

*Major:* Physics 301, 101L, 315, 115L, 316, and 116L; nine semester hours of upper-division coursework in astronomy, including at least two of the following courses: Astronomy 352K, 352L, 353, 358, and 364; and six additional upper-division hours in astronomy and/or physics.

*Minor for astronomy majors:* Six semester hours of coursework (other than astronomy, lower-division physics, lower-division mathematics, and Mathematics 427K) approved by the undergraduate adviser; and either six semester hours of upper-division physics in addition to the courses used to fulfill the major requirement or six semester hours of upper-division coursework approved by the undergraduate adviser.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

All astronomy majors should consult the astronomy undergraduate adviser regularly about the choice of appropriate courses in both the major and the minor. Qualified students are encouraged to carry out a supervised research project by taking a conference course, such as Astronomy 375 or 379H. No more than six of the hours counted toward the major requirement may be earned in conference courses.

## Biochemistry

Biochemistry majors must take either Mathematics 408C and 408D or Mathematics 408N, 408S, and 408M; and eight semester hours of physics: either Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.

*Major:* Chemistry 301 or 301H, 302 or 302H, 204 or 317; either 128K, 128L, 328M, and 328N, or 220C, 320M, and 320N; 339K, 339L, 353 or 353M, 455, 369L, and 370.

*Minor for biochemistry majors:* Either Biology 311C, 311D, and 325 or Biology 315H and 325H; six additional semester hours in biology, three of which are chosen from Biology 328, 339, 345, 361T, 365R or 371M, and 365S; and three additional hours chosen from the preceding list or

from Biology 320, 226L and either 326M or 326R, 330, 331L, 335, 344, 346, 347, 349, 360K, 361 and 365W.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

## Biology

In addition to the requirements below, biology majors must complete Mathematics 408C or 408N, Chemistry 301 or 301H, 302 or 302H, and 204; and one of the following: (1) Chemistry 220C, 320M, and 320N; (2) eight hours of coursework in physics, including laboratory work; or (3) six hours of coursework in computer science, including at least three hours of upper-division work.

*Major:* The following coursework:

1. Either Biology 311C, 311D, and 325 or Biology 315H and 325H.
2. Biology 206L or 208L.
3. Six semester hours in core biology courses, consisting of three hours in each of the following areas.
  - A. Cellular, developmental, and molecular biology: Biology 320, 344, 349.
  - B. Ecology and evolution: Biology 357, 370, 373.
4. Eighteen additional semester hours of coursework, consisting of three hours in each of the following six areas. No course may be counted toward more than one of the six areas in requirement 4. No course may be counted toward both requirement 3 and requirement 4. The courses counted toward requirement 4 must include at least three laboratory courses.
  - A. Cellular, developmental, and molecular biology: Biology 320, 320L, 323L, 325L, 325T, 226L, 326R, 328D, 330, 230L, 331L, 332, 333, 335, 336, 339, 339M, 344, 347, 349, 349L, 350M, 360K, 160L, 366, 366L, 366R, 366S, 368L, Chemistry 369.
  - B. Physiology and neurobiology: Biology 322, 122L, 328, 329, 129L, 336, 339, 345, 345E, 359K, 359R, 360K, 160L, 361, 361L, 361T, 365D, 365L, 365N, 365P, 365R, 365S, 365T, 165U, 365W, 366C, 371L, 371M.
  - C. Ecology and evolution: Biology 328M, 321L, 340L, 448L, 351, 352, 453L, 354L, 455L, 456L, 357, 458L, 359J, 262, 262L, 363, 364, 369L, 370, 471G, 373, 373L, 375, Marine Science 352C, 354Q.
  - D. Animal biology: Biology 321L, 438L, 340L, 346, 446L, 448L, 453L, 354L, 455L, 359J, 359K, 359R, 361T, 365S, 369L, 371L, 478L, Marine Science 354, 354C.
  - E. Plant biology: Biology 322, 122L, 324 and 124L, 327 and 127L, 328, 328D, 350M, 351, 352, 262, 262L, 363, 374 and 174L, Marine Science 352D.
  - F. Microbiology: Biology 226L, 326R, 329, 129L, 330, 230L, 333, 339, 364, Marine Science 354E.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

## Chemistry

Chemistry majors must take Mathematics 408C and 408D or Mathematics 408N, 408S, and 408M; and eight semester hours of physics: either Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.

*Major:* Chemistry 301 or 301H, 302 or 302H, 204 or 317; either 220C, 320M, and 320N, or 128K, 128L, 328M, and 328N; 353, 153K, 354 or 354L, 154K, 456, and 376K.

*Minor for chemistry majors:* Either (1) twelve semester hours of biology, geological sciences, mathematics, physics, or, with written consent of the department chair and approval of the dean, a field of study outside the College of Natural Sciences or the Jackson School of Geosciences; or (2) Computer Science 303E, 313E, and six hours chosen from Computer Science 323E, 324E, 326E, 327E, and 329E. Students who complete the second option may simultaneously fulfill some of the requirements of the Elements of Computing Certificate (p. 484).

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

## Computer Science

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate adviser in computer science. No student may enroll in any computer science course more than twice. No student may take more than three upper-division computer science courses in a semester without written consent of an undergraduate adviser in computer science.

*Major:* Computer Science 312 or 312H, 313K or 313H, 314 or 314H, 429 or 429H, 336 or 336H, 337 or 337H, 439 or 439H, 341 or 341H or 357 or 357H, and at least twelve additional semester hours of approved upper-division coursework in computer science. Computer Science 370 may be counted toward the degree only once. Note: Computer science courses with numbers ending in *H* are intended for students pursuing the Bachelor of Science in Computer Science, option II, the Turing Scholars program, and option III, computer science honors. Students outside these options may enroll in these courses only with the special consent of the honors director.

*Minor for computer science majors:* Mathematics 408C, 408D, and Statistics and Scientific Computation 321.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

With the exception of Computer Science 312 or 312H, 313K or 313H, and 314 or 314H, all computer science courses that may be counted toward a degree in computer science are restricted to students who have been admitted to the computer science major or have the consent of the undergraduate faculty adviser.

## Human Ecology

Human ecology majors must complete the following, with a grade of at least C- in each course: Mathematics 408N or the equivalent; Statistics and Scientific Computation 302, 303, 304, 305, 306 or 325H; either

(a) Chemistry 301 or 301H, 302 or 302H, and Biology 311C, or (b) Chemistry 301 or 301H and Biology 311C and 311D; and two to four additional hours in astronomy, biology, chemistry, computer science, geological sciences, mathematics, and/or physics. Courses designed for non-science majors may not be counted toward this requirement. This coursework also meets the core curriculum mathematics and science and technology requirements.

*Major:* Thirty semester hours of coursework in the School of Human Ecology, including at least fifteen hours of upper-division coursework and at least six hours chosen from each of the following areas: (a) Human Development and Family Sciences 304, 312, 313, 113L, 315L, 322, and 337; (b) Nutrition 306, 307, 107L, 312 or 312H, 112L, 315, 316, 218, 118L, 326 and 126L, 321, 331, 332, and 338W or 338H; and (c) Textiles and Apparel 205, 105L, 316Q, 219C and 119L, 325L, and 325M.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

To develop a meaningful and coherent degree program, the student should select courses with the assistance of faculty and academic advisers.

## Mathematics

Undergraduates seeking a Bachelor of Arts degree with a major in mathematics must choose either the standard option or the middle grades or secondary school teaching option.

*Major, standard option:* At least twenty-four semester hours of upper-division coursework in mathematics. Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

The student must complete the following:

1. Mathematics 408C and 408D
2. Mathematics 340L or 341
3. Mathematics 328K, 343K, or 373K
4. Mathematics 361K or 365C
5. Mathematics 362K
6. To broaden the student's training, at least one course chosen from the following: Mathematics 333L, 339J, 339U, 343L, 343M, 344K, 348, 358K, 361, 367K, 368K, 372K, 374M, 376C, 378K

*Major, options in mathematics for middle grades and secondary school teaching:* At least twenty-four semester hours of upper-division coursework in mathematics. Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

The teaching options are designed to give students the mathematical background appropriate for teaching middle grades and secondary school mathematics, but students must meet additional requirements, including grade point average requirements, to obtain certification. Lists of the combined requirements of the UTeach-Natural Sciences certification programs and these options are available from the UTeach-Natural Sciences (p. 486) academic adviser.

All students must complete the following:



1. Mathematics 408C and 408D
2. Mathematics 340L or 341
3. Mathematics 315C, 325K, 333L, 358K, and 362K
4. Mathematics 360M or 375D
5. Mathematics 361K or 365C
6. Mathematics 328K, 343K, or 373K

Students pursuing teacher certification through the UTeach-Natural Sciences program must also complete the following:

7. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: *Research Methods—UTeach*), or Physics 341 (Topic: *Research Methods—UTeach*)
8. History 329U or Philosophy 329U
9. Eighteen semester hours of professional development coursework consisting of:
  - A. Curriculum and Instruction 650S
  - B. Curriculum and Instruction 365C or UTeach-Natural Sciences 350
  - C. Curriculum and Instruction 365D or UTeach-Natural Sciences 355
  - D. Curriculum and Instruction 365E or UTeach-Natural Sciences 360
  - E. UTeach-Natural Sciences 101, 110, and 170
10. For students seeking middle grades certification, the following courses: Educational Psychology 363M (Topic 3: Adolescent Development), or Psychology 301 and 304; and Curriculum and Instruction 339E

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in the supporting course in requirement 8 and in each of the professional development courses listed in requirement 9 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 10. For information about the portfolio review and additional teacher certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

## Physics

Students majoring in physics must complete Chemistry 301 or 301H, 302 or 302H, and 204.

*Major:* Physics 315, 115L, 355, and at least fifteen semester hours of upper-division coursework in physics, including Physics 336K, 352K, and 353L.

*First minor for physics majors:* Twelve semester hours of mathematics, of which six must be in upper-division coursework; the upper-division coursework must include three hours in differential equations.

*Second minor for physics majors:* Six semester hours, of which three must be in upper-division coursework, in any one of the following: biology, chemistry, geological sciences, philosophy, psychology; or in courses offered in the College of Education or the Cockrell School of Engineering. Courses used to fulfill specific degree requirements

other than the writing requirement may not also be used to fulfill this requirement.

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00.

## Bachelor of Science in Astronomy

Astronomy tells us about the place of humankind in the universe: how Earth was created, how the Sun was formed, how galaxies form and evolve. It tells us where the universe is going and where it came from. Astronomers address these questions at a fundamental level. Their goal is to determine the basic and controlling properties of the universe and to transmit that knowledge to society. The Bachelor of Science in Astronomy is designed to give students an understanding of the universe and to prepare them to participate in the advancement of this exciting search.

Two options are available: astronomy and astronomy honors. Students who plan to follow option II, astronomy honors, must be admitted to the Dean's Scholars Honors Program (p. 481).

### Prescribed Work Common to all Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Astronomy must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. One of the following foreign language/culture choices. Students in option II are exempt from this requirement.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least thirty-six semester hours of upper-division coursework.
4. At least twenty-one hours of upper-division coursework, including at least twelve semester hours in physics and astronomy, must be completed in residence at the University.

## Additional Prescribed Work for Each Option

### Option I: Astronomy

5. Six semester hours in biology, chemistry, computer science, and/or geological sciences. Chemistry 301 or 301H and the courses in the Elements of Computing Certificate program may be counted toward this requirement; any other course to be counted must meet major requirements in the department that offers it.
6. Mathematics 408C and 408D, or the equivalent; and 427K, 427L, and 340L.
7. Physics 301, 101L, 315, 115L, 316, 116L, 336K, 352K, 353L, 355, 362K, 369, and 373.
8. Twelve semester hours of upper-division coursework in astronomy, including Astronomy 352K, 353, and 358. Astronomy 351 is recommended.
9. Nine additional semester hours of upper-division coursework in physics and/or astronomy.
10. Enough additional coursework to make a total of 123 semester hours.

### Option II: Astronomy Honors

5. Breadth requirement: An honors mathematics course, Chemistry 301H, and nine additional hours of coursework chosen from honors courses in the college. Credit earned by examination may not be counted toward this requirement.
6. Physics 301, 101L, 315, 115L, 316, and 116L.
7. Twelve semester hours of upper-division coursework in astronomy approved by the departmental honors adviser.
8. Nineteen semester hours of upper-division coursework in physics approved by the departmental honors adviser.
9. Three additional semester hours of upper-division coursework in astronomy or physics.
10. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
11. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
12. Astronomy 379H and either a three-semester-hour upper-division research course approved by the departmental honors adviser or a second section of Astronomy 379H.
13. Fifteen additional hours of coursework approved by the departmental honors adviser.
14. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
15. Enough additional coursework to make a total of 120 semester hours.

## Special Requirements

Students in both options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate under option II, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 12 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Bachelor of Science in Biochemistry

The degree of Bachelor of Science in Biochemistry is intended to prepare students for professional careers as chemists, either upon graduation or after graduate study in chemistry or related fields. In addition, it may serve as the basis for work in many areas outside pure chemistry, such as materials science, medicine and other health-related fields, pharmacology, patent law, business, and environmental science. The systems and synthetic biology option is intended to prepare students for professional and graduate programs by providing the quantitative and interdisciplinary skill sets necessary to understand biology from the level of molecules to the level of the organism. The honors option is intended to prepare students for academic or research careers.

Students who plan to follow option III, biochemistry honors, must be admitted to the Dean's Scholars Honors Program (p. 481).

## Prescribed Work Common to all Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Biochemistry must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. At least thirty-six semester hours of upper-division coursework.
3. At least twenty-one semester hours of upper-division coursework, including at least twelve semester hours of upper-division coursework in chemistry, must be completed in residence at the University.

## Additional Prescribed Work for Each Option

### Option I: Biochemistry

4. One of the following foreign language/culture choices:
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.

- C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
5. Mathematics 408C and 408D, or 408N, 408S, and 408M; and at least three semester hours of upper-division coursework in mathematics or computer science.
  6. One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
  7. The following chemistry courses:
    - A. General chemistry: Chemistry 301 or 301H, 302 or 302H, and 204 or 317.
    - B. Organic chemistry: Chemistry 128K, 128L, 328M, and 328N; or 220C, 320M, and 320N.
    - C. Biochemistry: Chemistry 339K, 339L, 369L, and 370.
    - D. Physical chemistry: Chemistry 353 or 353M.
    - E. Analytical chemistry: Chemistry 455.
  8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and nine additional semester hours in biology, chosen from the following courses. These nine hours must include at least three hours in each of the following areas; a single course may not fulfill this requirement in more than one area. A course may not count toward both requirement 8 and requirement 9.
    - A. Cellular and developmental biology: Biology 320, 226L and either 326M or 326R, 330, 331L, 335, 344, 346, 347, 349, 360K, 361, 365W
    - B. Physiology: Biology 328, 339, 345, 361T, 365R or 371M, 365S.
  9. At least six semester hours chosen from the following courses: Chemistry 431\*, 339J, 341\*, 354, 354L, 354S, 364C, 364D, 364E, 364F, 365D, 367C, 367L, 369K\*, 369T\*, 371K\*, 372C\*, 375K or 475K, and 376K\*. At least three of these hours must be in a laboratory course; courses marked with an asterisk fulfill this laboratory requirement. Three of these hours may come from the biology courses listed above in 8a. A course may not count toward both requirement 8 and requirement 9. No more than three semester hours in Chemistry 369K may be counted toward this requirement; three additional hours may be counted as electives. No more than three semester hours in Chemistry 371K may be counted toward this requirement; three additional hours may be counted as electives. No more than three semester hours of Chemistry 372C may be counted toward this requirement; three additional hours may be counted as electives.
  10. Enough additional coursework to make a total of 127 semester hours.
  5. Mathematics 408C and 408D, or 408N, 408S, and 408M; Statistics and Scientific Computation 321; and either Statistics and Scientific Computation 329C or Mathematics 340L or 341.
  6. One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
  7. Biology 311C, 311D, and 325, or Biology 315H and 325H.
  8. Six additional hours of upper-division biology chosen from the following: Biology 320, 226L\* and 326R, 330, 331L\*, 337, 344, 347, 349, and 360K\*. Courses marked with an asterisk (\*) may count toward the laboratory hours in requirement 10.
  9. Six additional hours of upper-division chemistry chosen from the following: Chemistry 128L\* and 328N, 341\*, 353 or 353M, 153K\*, 455\*, 369L\*, and 369T\*. Courses marked with an asterisk (\*) may count toward the laboratory hours in requirement 10.
  10. Of the twelve upper-division hours used to satisfy requirement 8 and requirement 9, at least six hours must be laboratory-based courses.
  11. Systems and Synthetic Biology 339J, 339Q, and 364C.
  12. One of the following sequences:
    - A. Computer Science 303E and nine hours chosen from: Computer Science 313E, 320N, 324E, 326E, 327E, and 329E.
    - B. Computer Science 312 and nine hours chosen from: Computer Science 313K, 314, and an upper-division computer science course. (Note: Students seeking a more rigorous foundation in computer science are encouraged to choose sequence b.)
  13. Six hours of Biology 377 or Chemistry 369K or another approved independent research course.
  14. Enough additional coursework to make a total of 127 semester hours.

### Option III: Biochemistry Honors

4. Breadth requirement: An honors mathematics course, Biology 315H and 325H, Chemistry 301H and 302H, and three additional semester hours of coursework chosen from honors courses in the college. Credit earned by examination may not be counted toward this requirement.
5. The following chemistry courses:
  - A. General chemistry: Chemistry 204 or 317.
  - B. Organic chemistry: Chemistry 128K, 128L, 328M, and 328N; or 220C, 320M, and 320N.
  - C. Biochemistry: Chemistry 339K, 339L, 369L, and 370.
  - D. Physical chemistry: Chemistry 353 or 353M.
  - E. Analytical chemistry: Chemistry 455.
6. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
7. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
8. Chemistry 379H and either a three-semester-hour upper-division research course approved by the departmental honors adviser or a second section of Chemistry 379H.

### Option II: Systems and Synthetic Biology

4. The following chemistry courses:
  - A. General chemistry: Chemistry 301 or 301H, 302 or 302H, and 204 or 317.
  - B. Organic chemistry: Chemistry 128K and 328M.
  - C. Biochemistry: Chemistry 339K and 370.

9. Twenty-eight additional semester hours of coursework approved by the departmental honors adviser.
10. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
11. Enough additional coursework to make a total of 120 semester hours.

## Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate under option III, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 8 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Order and Choice of Work

The student must consult the undergraduate adviser each semester regarding order and choice of work.

## Bachelor of Science in Biology

The Bachelor of Science in Biology degree program offers ten options. The options have certain prescribed work in common, and each option has additional requirements. Many fields in the study of biological systems require broadly based training that transcends the classical boundaries of biology. In planning a program of work to meet his or her degree requirements, a student interested in specializing in these interdisciplinary areas should choose courses both in biology and in sciences that complement biology. Students who plan to complete the program within four years will have little flexibility in course selection unless they plan a schedule in advance. More information is given in Order and Choice of Work (p. 497) below.

Students who plan to follow option IX, biology honors, must be admitted to the Dean's Scholars Honors Program (p. 481).

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Biology must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

2. Options I–VII and X: One of the following foreign language/culture choices. Students in options VIII and IX are exempt from this requirement.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least twenty-four semester hours of upper-division coursework beyond Biology 325 in biology and approved related fields, including at least one course from each of the following areas. In most options, the student must use specific courses to meet this requirement; these courses are listed in Additional Prescribed Work for Each Option (p. 493).
  - A. Cellular, developmental, and molecular biology: Biology 320, 326R, 344, 349.
  - B. Physiology and neurobiology: Biology 328, 361T, 365R, 365S.
  - C. Ecology, evolution, and behavior: Biology 357, 359K, 370, 373.
4. At least twenty-one semester hours of upper-division coursework in biology must be completed in residence at the University. All students must complete at least thirty-six semester hours of upper-division coursework.

## Additional Prescribed Work for Each Option

### Option I: Ecology, Evolution, and Behavior

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, and 204.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology. Three of these courses must be upper-division. One of the four courses must have a field component; the following courses may be used to meet this requirement: Biology 321L, 340L, 453L, 354L, 455L, 456L, 369L, 373L, Marine Science 352D, 354, 354C.
10. Biology 328M and three hours of coursework chosen from the following: Chemistry 320M, computer science courses at the level of Computer Science 303E or 313E, Geological Sciences 401 or 303, and upper-division mathematics courses.
11. In fulfilling requirement 3 above, the student must complete the following courses. No single course may be used to meet more than one of these requirements.
  - A. Ecology: Biology 357, 373, or Marine Science 320.
  - B. Evolution: Biology 370.



- C. Behavior and comparative physiology: Biology 322 and 122L, 359K, or 361T.
  - D. One of the following taxon-based diversity courses or pairs of courses: Biology 321L, 324 and 124L, 327 and 127L, 340L, 342L, 448L, 352, 353F, 453L, 354L, 455L, 262, 262L, 369L, Marine Science 352D, 354, 354C, 354E.
  - E. Six additional hours chosen from the following:
    - i Evolution: Biology 458L, 363, 472L, 374 and 174L, 478L.
    - ii Ecology: Biology 456L, 364, 364E, 373L, Marine Science 120L, 352C.
    - iii Behavior: Biology 438L, 359J, 359R.
    - iv Conservation biology: Biology 359, 375, Marine Science 354Q.
12. Enough additional coursework to make a total of 126 semester hours.

## Option II: Human Biology

- 5. Mathematics 408C and 408D, or 408N and 408S.
  - 6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
  - 7. Chemistry 301 or 301H, 302 or 302H, and 204.
  - 8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
  - 9. At least four laboratory courses in biology and related fields. Three of these courses must be upper-division. The student must complete Biology 206L or 208L. Anthropology 432L, Kinesiology 324K and Marine Science 120L may be counted toward this requirement, but the student must complete at least one upper-division laboratory course in biology.
  - 10. Biology 328M and Chemistry 220C, 320M, and 320N.
  - 11. In fulfilling requirement 3 above, the student must complete Biology 346, at least six semester hours in area a below, and at least three hours each in areas b through e.
    - A. Cellular and molecular biology: Biology 320, 320L, 323L, 325L, 325T, 226L and 326R, 344.
    - B. Anatomy: Anthropology 432L, Biology 446L, 478L, Kinesiology 324K.
    - C. Physiology: Biology 361T, 365R, 365S.
    - D. Behavior and psychology: Biology 359K, 359R, Psychology 332.
    - E. Evolution and ecology: Biology 357, 364, 370, 373.
  - 12. In fulfilling requirement 3 above, the student must complete at least fifteen semester hours of coursework, including at least nine hours of upper-division work, in one of the following concentrations. A course counted toward requirement 11 may not also be counted toward requirement 12.
    - A. Cellular, molecular, and developmental biology: Chemistry 369 and twelve hours chosen from the following courses: Biology 320L, 323L, 325T, 226L, 326R, 328D, 330, 230L, 331L, 332, 337 (Topic: *Genomics*), 337 (Topic: *Epigenetics*), 339M, 345, 349, 349L, 365N, 366R, 379J.
    - B. Genetics and biotechnology: Chemistry 369 and twelve hours chosen from the following courses: Biology 325L, 325T, 226L, 326R, 335, 337 (Topic: *Genomics*), 337 (Topic: *Emerging Infectious Disease*), 337 (Topic: *Epigenetics*), 347, 366, 366R, Philosophy 325M.
    - C. Pathogenesis and immunity: Chemistry 369 and twelve hours chosen from the following courses: Biology 226L, 326R, 330, 230L, 332, 336, 337 (Topic: *Emerging Infectious Disease*), 339M, 347, 360K, 160L, 360M, 361, 361L, 365T.
    - D. Social aspects of health and disease: Chemistry 369, Geography 357, Pharmacy 350K, Philosophy 325M, Sociology 319, 330C, 336C, 336D, 354K, 358D, 369K (Sociology 319 and 369K may not both be counted in the concentration).
    - E. Problems of developing countries: Biology 351, Geography 340D, 342C, 346, 356, 356T (Topic: *Global Societies*), 357, 358, Sociology 319, 324K, 340C, 346, 369K, 369L. (Sociology 319 and 369K may not both be counted in the concentration).
    - F. Human impact on the environment: Biology 359, 373, 373L, 375, 478T, Geography 334, 335N, 336C, 346, 356T (Topic: *Environment, Development, and Food Production*), 366K, 367K, Marine Science 320, 120L, 354Q, Philosophy 325C, Sociology 319.
13. Biology 137 (Topic 1: *Senior Seminar in Human Biology*), completed on the pass/fail basis in the student's senior year.
14. Enough additional coursework to make a total of 126 semester hours.

## Option III: Marine and Freshwater Biology

- 5. Mathematics 408C and 408D, or 408N and 408S.
- 6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
- 7. Chemistry 301 or 301H, 302 or 302H, 204, 220C, 320M, and 320N.
- 8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
- 9. At least four laboratory courses in biology. Three of these courses must be upper-division. The student must complete Biology 206L or 208L.
- 10. Biology 328M.
- 11. Geological Sciences 307 or Marine Science 307; Biology 101C (Topic: *Marine Science Seminar*); and three semester hours in geological sciences, chosen from courses that may be counted toward the requirements for a major in geological sciences.
- 12. In fulfilling requirement 3 above, the student must complete the following courses.
  - A. Biology 226L and 326R.

- B. Marine Science 320 and 120L.
- C. At least twenty-one semester hours of coursework chosen from the following: Biology 321L, 327, 127L, 328, 128L, 354L, 361T, 370, 375, Geological Sciences 422K, Marine Science 440, 352C, 352D, 353 (Topic 17: *Marine Fish Physiology*), 354C, 354Q, 354T, 354U, 367K, 170, 270, 370, Biology 448L or Marine Science 354, Biology 364 or Marine Science 354E. Six hours of this coursework must be completed at the Marine Science Institute at Port Aransas.

- 13. Enough additional coursework to make a total of 126 semester hours.

### Option IV: Microbiology and Infectious Diseases

- 5. Mathematics 408C and 408D, or 408N and 408S.
- 6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
- 7. Chemistry 301 or 301H, 302 or 302H, 204, and an organic chemistry/biochemistry series chosen from the following: Chemistry 220C, 320M, 320N, and 369; or 320M, 320N, 339K and 339L.
- 8. Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
- 9. Biology 206L.
- 10. Two upper division biology laboratory courses, one of which must be chosen from Biology 230L, 160L, and 361L. Biology 377/379H may be used for the second course if approved in advance by the microbiology faculty adviser. Biology 226L may not be counted toward requirement 10.
- 11. In fulfilling requirement 3 above, the student must complete the following courses: Biology 226L, 326R or 326M, 328M, 330, 339, 360K, 366, 370, and 320 or 332 or 344.
- 12. Enough additional coursework to make a total of 126 semester hours.

### Option V: Cell and Molecular Biology

- 5. Mathematics 408C and 408D, or 408N and 408S.
- 6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N.
- 7. Chemistry 301 or 301H, 302 or 302H, 204, 220C, 320M, 320N, and either 339K and 339L or 369 and 353M.
- 8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
- 9. At least four laboratory courses in biology. Three of these courses must be upper-division.
- 10. In fulfilling requirement 3 above, the student must complete the following courses.
  - A. Biology 320 and 344.
  - B. Biology 226L, 326R, 349, 370, and one of the following: 320L, 331L, 349L.

- C. Biology 328, 365R, or 365S.
- D. At least six semester hours chosen from the following: Biology 328M, 323L, 325L, 329, 129L, 330, 230L, 332, 333, 335, 336, 337J, 339, 339M, 343M, 345, 347, 349L, 350M, 360K, 160L, 360M, 365D, 365L, 365N, 365T, 365W, 366, 366R.

- 11. Enough additional coursework to make a total of 126 semester hours.

### Option VI: Neurobiology

- 5. Mathematics 408C and 408D, or 408N and 408S.
- 6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
- 7. Chemistry 301 or 301H, 302 or 302H, 204, 220C, 320M, and 320N.
- 8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
- 9. At least four laboratory courses in biology. The student must complete Biology 206L, and at least nine semester hours chosen from the following courses: Biology 320L, 325L, 331L, 365L, 366L, 366P, 366S, 371L, 478L, Electrical Engineering 374L.
- 10. In fulfilling requirement 3 above, the student must complete the following courses.
  - A. Biology 320, 344, 349, 370, and 365R.
  - B. Six semester hours chosen from the following courses: Biology 359K, 365D, 365N, 365T, 365W, 366C, 366D, 366F, Psychology 353K.
  - C. Six semester hours chosen from the following courses: Biology 328M, 321G, 337J, 465M, Chemistry 353 or 353M, 354, 369 or both 339K and 339L, 370, Computer Science 313E, 323E, 324E, 326E, 327E, Electrical Engineering 411, 313, 325, 438, 338K, 351K, 374K.
  - D. Three additional semester hours chosen from the following courses: Computer Science 303E, Psychology 308, 332, 353K.

- 11. Enough additional coursework to make a total of 126 semester hours.

### Option VII: Plant Biology

- 5. Mathematics 408C and 408D, or 408N and 408S.
- 6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; Physics 302K, 102M, 302L, and 102N.
- 7. Chemistry 301 or 301H, 302 or 302H, 204, 220C, 320M, and 320N.
- 8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.

9. At least four laboratory courses in biology. Three of these courses must be upper-division. The student must complete Biology 206L or 208L. Biology 177, 277, or 377 may be counted only once toward the laboratory requirement.
10. In fulfilling requirement 3 above, the student must complete at least twenty-four hours of coursework chosen from the following: Biology 320, 320L, 322 and 122L, 323L, 324 and 124L, 327 and 127L, 328, 128L, 331L, 343M, 350M, 351, 262 and 262L, 363, 370, 472L, 373, 373L, 374 and 174L, 375.
11. Eleven additional semester hours of upper-division coursework in the College of Natural Sciences or the Jackson School of Geosciences. A course may not be counted toward this requirement if it does not fulfill major requirements in the department that offers it.
12. Enough additional coursework to make a total of 126 semester hours.

## Option VIII: Teaching

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas; the student chooses either composite science certification with biology as the primary teaching field or life science certification. However, completion of the course requirements does not guarantee the student's certification. Information about additional certification requirements is available from the UTeach-Natural Sciences academic adviser.

5. Mathematics 408C and 408D, or 408N and 408S.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N; 302K, 102M, 302L, and 102N.
7. Chemistry 301 or 301H, 302 or 302H, 204, and either Chemistry 320M, 320N, and 220C or 320M and 369.
8. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
9. At least four laboratory courses in biology. Three of these courses must be upper-division. The student must complete Biology 206L or 208L.
10. In fulfilling requirement 3 above, the student must complete the following courses:
  - A. Biology 320, 226L, 326R, 370, and either 324 and 124L or 322 and 122L.
  - B. At least three semester hours chosen from the following courses in physiology, neurobiology, and behavior: Biology 322, 122L, 328, 328D, 128L, 329, 129L, 438L, 339, 345, 359J, 359K, 359R, 360K, 160L, 361, 361L, 361T, 365L, 465M, 365N, 365R, 365S, 371L.
  - C. One of the following courses with a substantial field component: Biology 321L, 340L, 342L, 453L, 455L, 456L, 373L, Marine Science 352D, 354, 354C.
11. One of the following research methods courses: Biology 328D, 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic 1: *Research Methods: UTeach*), Physics 341 (Topic 7: *Research Methods: UTeach*).
12. History 329U or Philosophy 329U.
13. One of the following:

- A. For composite science certification: Six semester hours of coursework in geological sciences. Courses intended for nonscience majors may not be counted toward this requirement. The remaining composite certification content requirements are met by the chemistry and physics courses used to fulfill requirements 6 and 7.
  - B. For life science certification: Biology 373, and three additional semester hours of biology chosen from the courses listed in requirement 10b.
14. Eighteen semester hours of professional development coursework consisting of:
    - A. Curriculum and Instruction 650S.
    - B. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
    - C. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.
    - D. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
    - E. UTeach-Natural Sciences 101, 110, and 170.
  15. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: Adolescent Development), or Psychology 301 and 304; and Curriculum and Instruction 339E.
  16. Enough additional coursework to make a total of 126 semester hours.

## Option IX: Biology Honors

5. Breadth requirement: An honors mathematics course; Biology 315H and 325H; Chemistry 301H and 302H; and one of the following: a three-hour honors-designated computer science course; a three-hour honors-designated statistics course; Physics 301 and 101L; Physics 315 and 115L; or Physics 316 and 116L. Credit earned by examination may not be counted toward this requirement.
6. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N. Courses used to satisfy this requirement may also be counted toward requirement 5.
7. Chemistry 204, 128K, 128L, 328M, and 328N.
8. In fulfilling requirement 3 above, the student must complete Biology 320 or 344, 349, 365R, 370, and at least twelve additional semester hours of upper-division coursework in biology chosen from a list available in the student's advising office. Six semester hours of thesis coursework may be counted toward the twelve semester hours of upper-division biology.
9. Three upper-division laboratory courses in biology. Biology 377 or 379H may be used as only one of the three required upper-division laboratory courses. Courses used to fulfill this requirement may also be counted toward requirement 8.
10. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
11. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
12. Two semesters of Biology 379H.

13. Fifteen additional semester hours of coursework approved by the departmental honors adviser.
14. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
15. Enough additional coursework to make a total of 120 semester hours.

### Option X: Computational Biology

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; Statistics and Scientific Computation 329C or Mathematics 340L or 341; Mathematics 362K; and Mathematics 358K or 378K or Statistics and Scientific Computation 321 or 325H or 328M, or Biology 328M.
6. Computer Science 303E; Computer Science 313E or Statistics and Scientific Computation 222; and one of the following courses: Computer Science 323E, 323H, 324E, 327E, 329E, 337, 367, Statistics and Scientific Computation 329D, 335, 374D, 374E, Mathematics 348, 372K, 376C.
7. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 317K, 117M, 317L, and 117N; 303K, 103M, 303L, and 103N.
8. Chemistry 301 or 301H, 302 or 302H, and 204.
9. Either Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology courses.
10. In fulfilling requirement 3 above, the student must complete Biology 321G, 370, and six additional hours of upper-division coursework in biology.
11. At least four laboratory courses in biology. Three of these courses must be upper-division. Biology 321G fulfills one of these upper-division requirements.
12. Enough additional coursework to make a total of 126 semester hours.

### Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in the supporting course in requirement 12, and in each of the professional development courses listed in requirement 14 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 15. For information about the portfolio review and additional teacher certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

To graduate under the honors option, students must remain in good standing in the Dean's Scholars Honors Program, must submit an honors thesis approved by the departmental honors adviser, and

must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

### Order and Choice of Work

Students begin the Bachelor of Science in Biology degree program with six hours of introductory biology for science majors (Biology 311C and 311D), as well as Chemistry 301 or 301H and 302 or 302H and Mathematics 408C and 408D or 408N and 408S. The genetics course, Biology 325, is prerequisite to other upper-division biology courses. Students should consult with academic advisers about specific concentrations within biology, about appropriate courses in mathematics and physical sciences, and about course load and the balance between laboratory and nonlaboratory work. Most students select an option by the end of the second year and take at least twenty-one hours of upper-division coursework in the major in the third and fourth years.

### Bachelor of Science in Chemistry

Four degree plans lead to the Bachelor of Science in Chemistry. Option I, chemistry, is intended to prepare students for professional careers as chemists, either upon graduation or after graduate study in chemistry or related fields. Option II, computation, is intended to prepare students for the workplace by giving them opportunities to develop hands-on computation skills. Option III, teaching, is intended to prepare students to enter the teaching profession. Option IV, chemistry honors, is intended to prepare students for academic or research careers. Students who plan to follow option IV must be admitted to the Dean's Scholars Honors Program (p. 481).

The four degree plans may also serve as the basis for work in many areas outside pure chemistry, such as materials science, medicine and other health-related fields, pharmacology, patent law, business, computation, or environmental science. After general chemistry courses, depending on his or her background, the student makes an intensive core study of some of the major areas of chemistry—organic, physical, inorganic, and analytical chemistry. The chemistry coursework in these degree plans culminates in approximately three semesters of advanced work, allowing each student to study more broadly by taking courses in some areas of chemistry not covered in the core courses, such as macromolecular chemistry, biochemistry, or other areas of physical chemistry, or more deeply by taking advanced special topics courses in areas of special interest and by undertaking research projects. Throughout the curricula, emphasis is placed on laboratory experience—synthesis, separations and analysis, structure identification and determination, measurement of rates of reactions, determinations of energy changes accompanying reactions. Supporting work in mathematics and physics is an integral part of the degree programs. Compared to the program leading to the Bachelor of Arts degree, the Bachelor of Science in Chemistry degree programs are more thorough and demanding and potentially more rewarding to the student planning a career in chemistry.

### Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.



In addition, students seeking the Bachelor of Science in Chemistry must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

- Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
- Options I and II: One of the following foreign language/culture choices. Students in options III and IV are exempt from this requirement.
  - Second-semester-level proficiency, or the equivalent, in a foreign language.
  - First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
- The following courses:
  - General chemistry: Chemistry 301 or 301H, 302 or 302H, and 317.
  - Organic chemistry: Chemistry 128K, 128L, 328M, and 328N; or 220C, 320M, and 320N.
  - Biochemistry: Chemistry 339K or 369.
  - Physical chemistry: Chemistry 353, 153K, 154K, and either 354 or 354L.
  - Inorganic chemistry: Chemistry 431.
  - Analytical chemistry: Chemistry 456 and 376K.
- Thirty-six semester hours of upper-division coursework.
- At least twenty-one semester hours of upper-division coursework, including at least twelve semester hours of upper-division coursework in chemistry, must be completed in residence at the University.

## Additional Prescribed Work for Each Option

### Option I: Chemistry

- Mathematics 408C and 408D, or 408N, 408S, and 408M; and at least three semester hours of upper-division coursework in mathematics or computer science.
- One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
- Six semester hours chosen from the following courses: Chemistry 339J, 339L, 341, \* 354, 354L, 354S, 364C, 364D, 364E, 364F, 365D, 367C, 367L, 368, 369K, \* 369L, \* 370, 371K, \* 372C, \* 375K, and 475K. At least three of these six hours must be in a laboratory course; courses marked with an asterisk (\*) may be used to fulfill this laboratory requirement. Chemistry 341 and 368 may be repeated for credit toward this requirement when the topics vary. No more than three semester hours in Chemistry 369K may be counted toward this requirement; three additional hours may be counted as electives. No more than

three semester hours in Chemistry 371K may be counted toward this requirement; three additional hours may be counted as electives. No more than three hours in Chemistry 372C may be counted toward this requirement; three additional hours may be counted as electives.

- Nine semester hours of coursework in the College of Natural Sciences (excluding chemistry), the Cockrell School of Engineering, and the Jackson School of Geosciences. Any course designed for science or engineering majors may be counted. With the exception of courses in the Elements of Computing Certificate program, a course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it. No more than six hours of laboratory or field research from the Jackson School or any department in the College of Natural Sciences or the Cockrell School may be counted.
- Enough additional coursework to make a total of 127 semester hours.

### Option II: Computation

Students who complete option II may simultaneously fulfill some of the requirements of the Certificate in Scientific Computation (p. 485).

- Mathematics 408C and 408D, or 408N, 408S, and 408M; and Statistics and Scientific Computation 329C or Mathematics 340L or 341.
- One of the following sequences: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
- Chemistry 368 (Topic: *Computational Chemistry*).
- At least three semester hours chosen from the following laboratory courses: Chemistry 341, 369K, 369T, and 371K.
- Statistics and Scientific Computation 222 and three of the following courses. The student must complete coursework from at least two of the following areas.
  - Numerical methods: Chemical Engineering 348, Computer Science 323E, 323H, 367, Mathematics 348, Statistics and Scientific Computation 335.
  - Statistical methods: Biomedical Engineering 335, Mathematics 358K, 378K.
  - Other computing topics: Computer Science 324E, 327E, 329E (approved topics), 377, Mathematics 346, 362M, 368K, 372K, 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E.
- Enough additional coursework to make a total of 127 semester hours.

### Option III: Teaching

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas; the student chooses one of the following areas: composite science certification with chemistry as the primary teaching field; physical sciences certification; or physical science, mathematics, and engineering certification. However, completion of the course requirements does not guarantee the student's certification.

Information about additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. History 329U or Philosophy 329U.
8. One of the following sequences:
  - A. For students seeking composition science certification: Physics 301, 101L, 316, and 116L; or 303K, 103M, 303L, and 103N; or 317K, 117M, 317L, and 117N.
  - B. For students seeking either physical sciences certification or, mathematics, physical science, and engineering certification: Physics 301, 101L, 316, 116L, 315, and 115L; or 303K, 103M, 303L, 103N, 315, and 115L.
9. The requirements of one of the following certification areas:
  - A. For composite science certification:
    - i Biology 311C and 311D.
    - ii Six hours of coursework in geological sciences; courses intended for non-science majors may not be counted toward this requirement.
    - iii Enough additional approved coursework in biology, geological sciences, or physics to provide the required twelve hours in a second field.
    - iv Chemistry 368 (Topic 1: *Research Methods: UTeach*) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
    - v In place of requirements 3c through 3f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours of chemistry: Chemistry 339K and 339L, or 369; 353; and 455 or 456.
  - B. For physical sciences certification:
    - i Mathematics 427K and 427L.
    - ii Chemistry 153K, 354L, and 154K.
    - iii Chemistry 354 and three hours of upper-division coursework in physics.
    - iv Chemistry 368 (Topic 1: *Research Methods: UTeach*) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
    - v In place of requirements 3c through 3f of the prescribed work above, the following courses, for a total of at least thirty-four semester hours of chemistry: Chemistry 339K and 339L, or 369; 353, and 455 or 456.
  - C. For mathematics, physical science, and engineering certification:
    - i Mathematics 315C, 360M or 375D (Topic: *Discovery: Introduction to Advanced Study in Mathematics*), 427K, and 333L.
    - ii Chemical Engineering 379 (Topic: *Fundamentals of Engineering and Design*), 379 (Topic: *Engineering Energy Systems*), and Mechanical Engineering 379M (Topic: *Design of Machines and Systems*).

- iii Chemistry 368 (Topic 1: *Research Methods: UTeach*) or, with the consent of the UTeach-Natural Sciences academic adviser, an upper-division chemistry course that includes a substantial research component.
- iv In place of requirements 3c through 3f of the prescribed work above, the following courses, for a total of at least thirty semester hours in chemistry: Chemistry 353 and 153K, 455, and 369.

10. Eighteen semester hours of professional development coursework consisting of:
  - a. Curriculum and Instruction 650S.
  - b. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
  - c. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.
  - d. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
  - e. UTeach-Natural Sciences 101, 110, and 170.
11. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
12. Enough additional coursework, if needed, to make a total of 126 semester hours.

## Option IV: Chemistry Honors

6. Breadth requirement: An honors mathematics course, Chemistry 301H and 302H, Physics 301, 101L, 316, and 116L, and a three-semester-hour honors course in biology or computer science. Credit earned by examination may not be counted toward this requirement.
7. Chemistry 317.
8. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Chemistry 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser, or six hours of Chemistry 379H.
11. Twenty-two additional hours of coursework approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

## Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* (<http://catalog.utexas.edu/general-information>).

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in the supporting course in requirement 7, and each of the professional development courses listed in requirement 10 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 11. For information about the portfolio review and additional teacher certification requirements, consult the UTeach-Natural Sciences academic adviser.

To graduate under option IV, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 10 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Order and Choice of Work

Students are strongly recommended to take the chemistry/biochemistry—major sections of the following courses: Chemistry 301 or 301H (if taken), 302 or 302H, 128K, 128L, 328M, and 328N. Students planning a graduate program are strongly recommended to take Physics 301, 101L, 316, 116L, 315, and 115L.

Students in option II should consult the undergraduate adviser each semester regarding order and choice of work; those in option III should consult the UTeach-Natural Sciences academic adviser.

The following order of work is recommended as a typical minimum program for option I. It assumes that the student has high school credit in trigonometry, college algebra, and the first semester of general chemistry; is able to earn credit by examination for Chemistry 301; and is able to score well enough on the ALEKS placement examination to take Mathematics 408C or 408N in the first semester of the freshman year. Many students meet some of the following course requirements by credit by examination.

**First year:** Chemistry 302 or 302H, and 317; Mathematics 408C and 408D, or 408N, 408S, and 408M; Physics 301 and 101L, or 303K and 103M, or 317K and 117M (to be taken after Mathematics 408C or 408N); Rhetoric and Writing 306; six semester hours to fulfill core curriculum requirements.

**Second year:** Chemistry 128K, 128L, 328M, and 328N, or 220C, 320M, and 320N; any coursework needed to meet a core curriculum requirement; three semester hours to be counted toward requirement 4 of the prescribed work; English 316K; Physics 316 and 116L, or 303L and 103N, or 317L and 117N; an upper-division mathematics course (such as Mathematics 427K) or an upper-division computer science course.

**Third year:** Chemistry 339K or 369, 353, 153K, 354L, 456; six semester hours of American and Texas government; six semester hours of American history; three semester hours of electives; a three-semester-hour course to fulfill a core curriculum requirement; three semester hours to be counted toward requirement 4 of the prescribed work.

**Fourth year:** Chemistry 431, 154K, 376K, and courses to fulfill requirement 3 of the prescribed work. The student must also take enough additional coursework to fulfill requirements 4, 5, 9, and 10 of the prescribed work. It is recommended that the majority of the elective courses taken to fulfill requirements 4 and 9 be chosen from

upper-division courses in biology, chemistry, chemical engineering, mathematics, and physics.

## Bachelor of Science in Computer Science

The Bachelor of Science in Computer Science degree program provides a strong technical background for students planning to begin careers upon graduation and for those interested in graduate study in computer science. This program allows students to take more coursework in computer science and related technical areas than does the Bachelor of Arts degree program.

In addition to three options leading to the Bachelor of Science in Computer Science, students may apply to option IV, the Integrated Program, which leads to simultaneous completion of the Bachelor of Science in Computer Science and the Master of Science in Computer Science. The requirements for the Bachelor of Science in Computer Science, option IV, are given below. The requirements for the Master of Science in Computer Science are described in the *Graduate Catalog* at <http://registrar.utexas.edu/catalogs/>. In brief, they are nine semester hours of graduate-level diversity coursework in computer science, consisting of three hours in each of three areas; fifteen additional hours of graduate coursework in computer science; and six hours of approved graduate coursework in a supporting area. The student must complete two semesters in residence in the Graduate School.

Students who would like to pursue any of the following options must first be admitted to the degree program. The admission processes for options I, II, and IV are described in The Major in Computer Science (p. 478); the admission process for option III is described in the section Dean's Scholars Honors Program (p. 481).

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Computer Science must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I, II, and IV: One of the following foreign language/culture choices. Students in option III and V are exempt from this requirement.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.

- C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. At least forty-two semester hours of upper-division coursework.
  4. At least twenty-one semester hours of upper-division coursework in computer science must be completed in residence at the University.

## Additional Prescribed Work for Each Option

### Option I: Computer Science

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341 or Statistics and Scientific Computation 329C; and Statistics and Scientific Computation 321.
6. One of the following sequences of coursework:
  - A. Either Biology 311C, 311D, and 325 or Biology 315H and 325H, and Biology 206L or 208L.
  - B. Chemistry 301 or 301H, 302 or 302H, and 204.
  - C. Geological Sciences 401 and either 404C or 405.
  - D. Physics 303K, 303L, 103M, and 103N.
7. An additional sequence chosen from those in requirement 6 above, or one of the following:
  - A. At least three hours of upper-division coursework in biology approved by the undergraduate adviser.
  - B. Chemistry 128K, 128L, 328M, and 328N, or Chemistry 220C, 320M, and 320N, or at least six hours of upper-division coursework in chemistry approved by the undergraduate adviser.
  - C. Geological Sciences 416K and 426P, or at least six hours of upper-division coursework in geological sciences approved by the undergraduate adviser.
  - D. Physics 315 and at least three hours of upper-division coursework in physics approved by the undergraduate adviser.
  - E. At least six hours of upper-division coursework in mathematics approved by the undergraduate adviser. A course may not be counted toward both requirement 5 and requirement 7.
  - F. Electrical Engineering 313 and 331.
8. Computer Science 312 or 312H, 313K or 313H, 314 or 314H, 429 or 429H, 336 or 336H, 337, 439 or 439H, 341 or 341H or 357 or 357H, 345 or 345H, and fifteen additional hours of approved upper-division coursework.
9. Enough additional coursework to make a total of 127 semester hours.

### Option II: Turing Scholars Honors

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341 or Statistics and Scientific Computation 329C; and Statistics and Scientific Computation 321.
6. One of the following sequences of coursework:

- A. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 206L, or 208L.
  - B. Chemistry 301 or 301H, 302 or 302H, and 204.
  - C. Geological Sciences 401 and either 404C or 405.
  - D. Physics 303K, 303L, 103M, and 103N.
7. An additional sequence chosen from those in requirement 6 above, or one of the following:
    - A. At least three hours of upper-division coursework in biology approved by the undergraduate adviser.
    - B. Chemistry 128K, 128L, 328M, and 328N, or Chemistry 220C, 320M, and 320N, or at least six hours of upper-division coursework in chemistry approved by the undergraduate adviser.
    - C. Geological Sciences 416K and 426P, or at least six hours of upper-division coursework in geological sciences approved by the undergraduate adviser.
    - D. Physics 315 and at least three hours of upper-division coursework in physics approved by the undergraduate adviser.
    - E. At least six hours of upper-division coursework in mathematics approved by the undergraduate adviser. A course may not be counted toward both requirement 5 and requirement 7.
    - F. Electrical Engineering 313 and 331.
  8. Computer Science 313K or 313H, and 314 or 314H.
  9. Computer Science 429 or 429H, 336 or 336H, 337 or 337H, 439 or 439H, 341 or 341H or 357 or 357H, 345 or 345H, 178H, and 379H. The courses the student chooses to fulfill this requirement must be approved by the Turing Scholars program director; at least five of them, in addition to Computer Science 178H and 379H, must be honors courses. The honors thesis the student completes in Computer Science 379H must be approved by the program director.
  10. Enough additional coursework to make a total of 127 semester hours.

### Option III: Computer Science Honors

5. Breadth requirement: An honors mathematics course; Computer Science 313H and 314H; one of the following two-semester sequences: Biology 315H and 325H, Chemistry 301H and 302H, Physics 301, 101L, 316, and 116L; and either an additional three hours chosen from these courses or Physics 315 and 115L. Credit earned by examination may not be counted toward this requirement.
6. At least six semester hours of upper-division coursework in mathematics.
7. Computer Science 429H, 336H, 439H, and twelve additional hours of upper-division coursework in computer science.
8. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Computer Science 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser.



11. Twenty-five additional semester hours of coursework approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

### Option IV: Integrated Program

5. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341 or Statistics and Scientific Computation 329C; and Statistics and Scientific Computation 321.
6. One of the following sequences of coursework:
  - A. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 206L or 208L.
  - B. Chemistry 301 or 301H, 302 or 302H, and 204.
  - C. Geological Sciences 401 and either 404C or 405.
  - D. Physics 303K, 303L, 103M, and 103N.
7. An additional sequence chosen from those in requirement 6 above, or one of the following:
  - A. At least three hours of upper-division coursework in biology approved by the undergraduate adviser.
  - B. Chemistry 128K, 128L, 328M, and 328N, or Chemistry 220C, 320M, and 320N, or at least six hours of upper-division coursework in chemistry approved by the undergraduate adviser.
  - C. Geological Sciences 416K and 426P, or at least six hours of upper-division coursework in geological sciences approved by the undergraduate adviser.
  - D. Physics 315 and at least three hours of upper-division coursework in physics approved by the undergraduate adviser.
  - E. At least six hours of upper-division coursework in mathematics approved by the undergraduate adviser. A course may not be counted toward both requirement 5 and requirement 7.
  - F. Electrical Engineering 313 and 331.
8. Computer Science 312 or 312H, 313K or 313H, 314 or 314H, 429 or 429H, 336 or 336H, 337 or 337H, 439 or 439H, 345 or 345H, 353 or 357 or 357H, and nine additional hours of approved upper-division coursework.
9. Enough additional coursework to make a total of 120 semester hours

### Option V: Teaching (Senior grades)

5. History 329U or Philosophy 329U.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M; either 340L or 341 or Statistics and Scientific Computation 329C.
7. One of the following sequences of coursework:
  - A. Biology 311C and 311D; and Biology 206L or 208L.
  - B. Chemistry 301 or 301H, 302 or 302H, and 204.
  - C. Geological Sciences 401 and either 404C or 405.
  - D. Physics 303K, 303L, 103M, and 103N.

8. Computer Science 312 or 312H, 313H 313K, 314 or 314H, 429 or 429H, 336 or 336H, 337 or 337H, 439 or 439H, 341 or 341H or 357 or 357H, and 345 or 345H.
9. The requirements of one of the following certification areas:
  - A. For Computer Science Certification:
    - i Statistics and Scientific Computation 321.
    - ii An additional sequence chosen from the following:
      - a. Biology 325 and 337 (Topic 2: *Research Methods: UTeach*).
      - b. At least three hours of upper-division coursework in chemistry approved by the undergraduate adviser; and Chemistry 368 (Topic 1: *Research Methods: UTeach*).
      - c. Physics 315 and 341 (Topic 7: *Research Method: UTeach*).
    - iii Fifteen additional hours of approved computer science upper-division coursework.
  - B. For Computer Science and Mathematics Certification:
    - i Mathematics 315C, 333L, 362K, either 360M or 375D, and Statistics and Scientific Computation 321.
    - ii Twelve additional hours of approved computer science upper-division coursework.
    - iii Biology 337 (Topic 2: *Research Methods: UTeach*), or Chemistry 368 (Topic 1: *Research Methods: UTeach*), or Physics 341 (Topic 7: *Research Methods: UTeach*).
10. Eighteen semester hours of professional development coursework consisting of:
  - A. Curriculum and Instruction 650S.
  - B. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
  - C. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.
  - D. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
  - E. UTeach-Natural Sciences 101, 110, and 170.
11. Enough additional coursework to make a total of 127 semester hours.

### Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* (<http://catalog.utexas.edu/general-information>).

To graduate and be recommended for certification students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in the supporting course in requirement 5, and in each of the professional development courses listed in requirement 10 and must pass the final teaching portfolio review. For information about the portfolio review and

additional teacher certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

With the exception of Computer Science 312 or 312H, 313K or 313H, and 314 or 314H, all computer science courses that may be counted toward a degree in computer science are restricted to students who have been admitted to the computer science major or have the consent of the undergraduate faculty adviser.

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate adviser in computer science. No student may enroll in any computer science course more than twice. No student may take more than three upper-division computer science courses in a semester without written consent of an undergraduate adviser in computer science.

## Additional Requirements for Option II

Students in option II, the Turing Scholars program, must maintain a University grade point average of at least 3.30 and a grade point average in computer science of at least 3.30; in rare circumstances, this grade point average requirement will be waived for students whose honors thesis has been judged by the Department of Computer Science Undergraduate Thesis Committee to be truly outstanding. In addition to this grade point average requirement, students in option II must know and abide by the academic and disciplinary policies given in this catalog and in *General Information*. Those who fail to do so will be considered for academic dismissal from the Turing Scholars program. Under special circumstances and at the discretion of the director, a student will be allowed to continue in the program under academic review. A student who is academically dismissed from the program may enter another computer science program if he or she fulfills the scholastic standards for continuance in the University given in *General Information*. Students in scholastic difficulty should discuss their problems with a Turing Scholars program academic adviser and the director.

## Additional Requirements for Option III

To graduate under option III, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 10 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Additional Requirements for Option IV

### Satisfactory Progress

Students are expected to make continuous progress toward the degree by completing required computer science coursework each semester. Those who fail to take program coursework two long-session semesters in a row will be removed from the program and re-enrolled in the Bachelor of Science in Computer Science option (I, II, or III) that they were following before admission to the Integrated Program. Students will be notified before this action is taken; they must meet with their academic adviser upon being notified.

### Probation

The student is placed on probation if his or her grade point average in required undergraduate computer science courses falls below 3.00. Except with the consent of the undergraduate adviser or the graduate

adviser, a student on probation may not take graduate computer science courses.

## Dismissal

The student is dismissed from the Integrated Program if (1) he or she fails to improve his or her academic performance significantly while on probation, or (2) he or she will not achieve a grade point average of 3.00 even by earning grades of A in all remaining required undergraduate and graduate computer science courses.

Like all students, those in the Integrated Program must know and abide by the academic and disciplinary policies given in this catalog and in *General Information*. Those who fail to do so will be considered for academic dismissal from the program. Under special circumstances and at the discretion of the director, a student may be allowed to continue in the program under academic review. A student who is academically dismissed from the program may enter another computer science program if he or she fulfills the scholastic standards for continuance in the University given in *General Information*. Students in scholastic difficulty should discuss their problems with an academic adviser and the undergraduate faculty adviser.

## Graduation

To receive the Bachelor of Science in Computer Science and Master of Science in Computer Science degrees through the Integrated Program, a student must have a grade point average of at least 3.00 in the coursework in the Master of Science in Computer Science Program of Work. He or she must also have a grade point average in graduate computer science coursework of at least 3.00.

## Order and Choice of Work

The student must consult the faculty adviser each semester regarding order and choice of work.

Note: Computer science courses with numbers ending in *H* are intended for students in option II, the Turing Scholars program, and option III, computer science honors. Students outside these options may enroll in these courses only with the special consent of the honors director.

## Bachelor of Science in Environmental Science

The Bachelor of Science in Environmental Science degree program is designed for students interested in an interdisciplinary scientific perspective on environmental and sustainability issues, analysis, and management. The degree program provides the broad foundation in physical, life, and social sciences needed for a career or graduate study in environmental science and related fields such as climate change, ecology, and conservation. Students who complete the program successfully will be able to assess environmental issues critically from multiple perspectives; to perform field, laboratory, and computer analyses; and to conduct original research. The program is designed to prepare graduates for careers in local, state, and federal government laboratories and nonprofit agencies, environmental consulting firms, environmental education and outreach agencies, and universities and other research settings. The degree is offered by the Jackson School of Geosciences with a major in geological sciences, by the College of Liberal Arts with a major in geographical sciences, and by the College of Natural Sciences with a major in biological sciences. The degree programs share common prescribed work, but

each major has its own specific requirements. Students may earn only one Bachelor of Science in Environmental Science degree from the University.

Students must apply for admission to the degree program after completing prerequisite coursework. To be competitive for admission, students should have a grade point average of at least 2.75. More information about admission requirements is given in The Bachelor of Science in Environmental Science (p. 479).

The Bachelor of Science in Environmental Science curriculum consists of 126 semester hours of coursework. All students must complete the University's Core Curriculum (p. 22). The specific degree requirements consist of prescribed work and major requirements. In some cases, a course that is required for the degree may also be counted toward the core curriculum.

A course in one prescribed work area may not also be used to fulfill the requirements of another prescribed work area; the only exception to this rule is that a course that fulfills another requirement may also be used to fulfill the writing requirement if the course carries a writing flag.

## Prescribed Work Common to All Options

1. Ecology: Biology 373 and 373L, or Marine Science 320 and either 120L or 152T (Topic: *Marine Ecology*).
2. Geological sciences: Geological Sciences 302P, 401 or 303, and 346C.
3. Geography: Geography 335N.
4. Field experience: One course from each of the following lists:
  - A. Introductory field seminar: Environmental Science 311.
  - B. Senior field/research experience: Environmental Science 371 or Biology 478T or 377 (with prior approval of the faculty adviser).
5. Research methods: Environmental Science 331.
6. Environmental and sustainability themes: One course in each of the following thematic areas:
  - A. Environmental and sustainability policy, ethics, and history: Geography 334, 336C, 340D, 342C, 356C, 356T (approved topics only), Philosophy 325C.
  - B. Geographic information systems: Geography 360G, 462K, Geological Sciences 327G.
  - C. Climates and oceans: Biology 456L, Geography 333K, 356T (approved topics only), Geological Sciences 371C (approved topics only), 377P, Marine Science 320, 440, 354Q, 354T, 367K. Marine Science 320 may not be used to satisfy both requirement 1 and requirement 6.
  - D. Environmental economics, sustainability, and business: Economics 304K, 330T.
7. Environmental Science 141 and 151.
8. Two courses with a writing flag. One of these courses must be upper-division. Courses that meet this requirement are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

## Additional Prescribed Work for Each Option

All students must complete at least fifteen semester hours of upper-division coursework, including one upper-division laboratory/field course in addition to the laboratory/field courses in the prescribed work for the degree. The student must complete Biology 311C, 311D, and 325, or 315H and 325H, with a grade of at least C- in each before progressing to other upper-division biology courses.

### Option I: Biological Sciences

9. Mathematics: Mathematics 408C, or 408N and 408S.
10. Chemistry: Chemistry 301 or 301H; 302 or 302H; and 204.
11. Physics: Physics 317K and 117M, or four hours of another calculus-based physics sequence.
12. Biological Sciences: Biology 311C and 311D, or 315H.
13. One of the following foreign language/culture choices.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
14. Three hours in statistics chosen from Biology 328M and Statistics and Scientific Computation 328M and 321; with the consent of the undergraduate adviser, an upper-division statistics or probability course may be used to fulfill this requirement.
15. Three hours in conservation and environmental biology chosen from Biology 351, 359, 375, and Marine Science 352 (Topic: *Concepts in Marine Conservation Biology*).
16. Biology 325 or 325H (for students completing Biology 315H), and 370.
17. One of the following taxon/systems-based diversity courses or pairs of courses: Biology 321L, 324 and 124L, 327 and 127L, 337 (Topic: *Natural History of the Protists*), 340L, 342L, 448L, 353F, 453L, 354L, 455L, 262 and 262L, 364, 369L, 471G, Marine Science 352 (Topic: *Principles of Estuarine Ecology*), 352 (Topic: *Marine Invertebrates*), 352D, 354C, 354E, 354U, Geological Sciences 479M.
18. One of the following physiology, neurobiology, and behavior courses or pairs of courses: Biology 322 and 122L, 328 and 128L, 438L, 339, 345E, 346, 359J, 359K, 359R, 361, 361T, 465M, 365R, 365S, 371L, Marine Science 355C.
19. Enough additional coursework to make a total of 126 hours.

### Option II: Biological Sciences Honors

9. Breadth Requirement: An honors mathematics course; Biology 315H and 325H; Chemistry 301H and 302H; Physics 301 and 101L; and a designated honors statistics course. Credit earned by examination may not be counted toward this requirement.
10. Chemistry 204.
11. A section of Undergraduate Studies 302 or 303 that is approved by the program adviser or Environmental Science 331.
12. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.

13. Two semesters of Biology 379H. One semester may be used to fulfill requirement 4b.
14. Biology 370.
15. Three semester hours in conservation and environmental biology chosen from Biology 375, 351, 359, or Marine Science 352 (Topic: *Concepts in Marine Conservation Biology*).
16. One of the following taxon/systems-based diversity courses or pairs of courses: Biology 321L, 324 and 124L, 327 and 127L, 337 (Topic: *Natural History of the Protists*), 340L, 342L, 448L, 353F, 453L, 354L, 455L, 262 and 262L, 364, 369L, 471G; Marine Science 352 (Topic: *Principles of Estuarine Ecology*), or 352 (Topic: *Marine Invertebrates*), 352D, 354C, 354E, 354U; or Geological Sciences 479M.
17. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
18. Enough additional coursework approved by the honors adviser to make a total of 126 semester hours.

## Special Requirements

Students must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalog/>.

To graduate under the honors option, students must remain in good standing in the Dean's Scholars Honors Program, must submit an honors thesis approved by the program honors adviser, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Bachelor of Science in Human Development and Family Sciences

The Bachelor of Science in Human Development and Family Sciences focuses on the study of human development, individuals in a family context, relationships, and well-being within the family and the broader social, economic, community, and governmental environment. Students in the program are expected to develop knowledge and understanding about human development and family dynamics through classroom experiences, observation of children and families, and research. They have opportunities to apply their knowledge through practicum experiences in research and placements in the field. The program is designed to give students excellent preparation for graduate training that leads to careers in academia, research, medicine, and other health professions, as well as for employment in a field involving work with children, families, and adults.

Students seeking the Bachelor of Science in Human Development and Family Sciences must choose one of the six options described below. Those who plan to follow option V must be admitted to the Dean's Scholars Honors Program (p. 481) and those who plan to follow option VI must be admitted to the Honors in Advanced Human Development and Family Sciences Program (p. 481).

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Human Development and Family Sciences must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Psychology 301; and six semester hours, at least three of which must be upper-division, chosen from courses in economics, social or cultural anthropology, and psychology. Neither Psychology 304 nor 333D may be counted toward this degree.
3. At least thirty-six semester hours of upper-division coursework. At least twenty-one semester hours must be completed in residence at the University.
4. Eighteen semester hours in the School of Human Ecology must be completed in residence at the University.

## Additional Prescribed Work for Each Option

### Option I: Early Childhood

This option is designed to provide the necessary foundation for further study or a career in working with children in applied settings.

5. Statistics and Scientific Computation 302; Mathematics 408C or 408N.
6. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302 or 302H; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for non-science majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
7. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.
8. Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose practicum applications have been approved. Practicum applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.



9. Human Development and Family Sciences 338 and 378L; and six additional semester hours chosen from Human Development and Family Sciences 342, 345, 351, 358, 362, 366, and 378K (Topic 6: *Introduction to Early Childhood Intervention*).
10. Enough additional coursework to make a total of 120 semester hours.

## Option II: Human Development

This option involves the study of development across the life span.

5. Statistics and Scientific Computation 302; Mathematics 408C or 408N.
6. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302 or 302H; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for non-science majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
7. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.
8. Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
9. Human Development and Family Sciences 378L; six semester hours chosen from Human Development and Family Sciences 335, 351, and 371; and three additional semester hours chosen from Human Development and Family Sciences 335, 342, 343, 345, 351, 358, 371, and 372K.
10. Enough additional coursework to make a total of 120 semester hours.

## Option III: Families and Personal Relationships

This option involves the study of the formation and maintenance of close relationships, especially couple and family relationships.

5. Statistics and Scientific Computation 302; Mathematics 408C or 408N.
6. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302 or 302H; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for non-science majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
7. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.

8. Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
9. Human Development and Family Sciences 337, and either 356 or 372K.
10. Six additional semester hours chosen from Human Development and Family Sciences 322, 335, 345, 347, 356, 358, 360, 371, and 372K.
11. Enough additional coursework to make a total of 120 semester hours.

## Option IV: Families and Society

This option involves the study of the family and its interactions with larger socioeconomic systems, such as the economy, work, the media, public policy, and government.

5. Statistics and Scientific Computation 302; Mathematics 408C or 408N.
6. Chemistry 301 or 301H; Biology 311C; Biology 311D or Chemistry 302 or 302H; and three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for non-science majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
7. Nine semester hours from an approved list of supporting courses available from the School of Human Ecology. Students should confer with their advisers about courses appropriate to their career goals.
8. Nutrition 306; Human Development and Family Sciences 304, 312, 313, 113L, 315L, and 340; six hours chosen from Human Development and Family Sciences 352, 652F, 352L, 652P, and 355; and three additional hours of coursework in human development and family sciences. Registration for Human Development and Family Sciences 352, 652F, 352L, 652P, and 355 is restricted to students whose applications have been approved. Applications are available in the School of Human Ecology advising office; application deadlines are May 1 for enrollment the following spring semester and December 1 for enrollment the following fall semester.
9. Human Development and Family Sciences 347 and 362; and six additional semester hours chosen from Human Development and Family Sciences 322, 342, 343, 360, 366, and 378K (Topic 6: *Introduction to Early Childhood Intervention*).
10. Enough additional coursework to make a total of 120 semester hours.

## Option V: Human Development and Family Sciences Honors

This option is designed to prepare students who have been admitted to the Dean's Scholars program for academic or research careers.

5. Breadth requirement: A calculus course and a statistics course, one of which must be a designated honors course; Biology 315H and 325H; Chemistry 301H and 302H; and three additional hours of honors-designated or approved coursework in biology, chemistry, computer science, mathematics, statistics and scientific computation, or physics. Credit earned by examination may not be counted toward this requirement.
6. Human Ecology 115H and 225H.
7. Human Development and Family Sciences 304H, 312, 313H, 113L, 315L, and fifteen semester hours chosen from the following: Human Development and Family Sciences 335, 337, 342, 343, 345, 347, 351, 356, 358, 362, 371, 372K, 378L, and approved social science courses.
8. A section of Undergraduate Studies 302 or 302 that is approved by the departmental honors adviser.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Human Development and Family Sciences 355H and 379H.
11. Twenty-one additional semester hours of coursework approved by the departmental honors adviser.
12. Six hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

### Option VI: Honors in Advanced Human Development and Family Sciences

This option is designed for highly motivated and talented students who are interested in research experience and training.

1. A calculus course and a statistics course, one of which must be a designated honors course.
2. Chemistry 301 or 301H; Biology 311C; and Biology 311D or Chemistry 302 or 302H.
3. Three additional semester hours of coursework in astronomy, biology, chemistry, computer science, geological sciences, mathematics, nutrition (other than Nutrition 306), or physics. Courses designed for nonscience majors may not be counted toward this requirement; students should consult the School of Human Ecology for a list of courses that may be counted.
4. Human Development and Family Sciences 304H, 312, 313H, 113L, and 315L; fifteen semester hours chosen from: Human Development and Family Sciences 335, 337, 342, 343, 345, 347, 351, 356, 358, 362, 371, 372K, 378L, and approved social science courses.
5. Human Development and Family Sciences 355H and 379H.
6. Twenty-one semester hours of additional upper-division coursework approved by the departmental honors adviser.
7. Enough additional coursework to make a total of 120 semester hours.

### Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and grade point average in these courses of at least 2.00. More information about

grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate under option V, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 10 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

To graduate under option VI, students must remain in good standing with an overall in-residence grade point average of at least 3.30 and an overall grade point average of 3.50 in all Human Development and Family Sciences courses. In addition, student research conducted in Human Development and Family Sciences 355H and 379H must be presented in an approved public forum, such as the college's annual Undergraduate Research Forum. Students who fail to maintain the required grade point average may be subject to dismissal from the program. Under special circumstances and at the discretion of the human development and family sciences honors adviser, a student may be allowed to continue under academic review.

## Bachelor of Science in Interdisciplinary Science

### Prescribed Work

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Interdisciplinary Science must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

This degree is designed to fulfill the course requirements for certification in Texas as a middle grades teacher in the composite teaching field of mathematics/science. However, completion of the course requirements does not guarantee the student's certification. For information about additional certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. History 329U or Philosophy 329U.
3. Eighteen semester hours of professional development coursework consisting of:
  - A. Curriculum and Instruction 650S.
  - B. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
  - C. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.

- D. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
- E. UTeach-Natural Sciences 101, 110, and 170.

## Major Requirements

### Middle Grades Teaching in Mathematics and Science

4. Curriculum and Instruction 339E.
5. Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304.
6. The following foundation courses:
  - A. Mathematics 408C and 408D, or 408N, 408S, and 408M; and Mathematics 315C, 427K, 333L, and 362K. Students who plan to take physics courses to fulfill requirement 8 must also complete Mathematics 340L or 341.
  - B. Chemistry 301 or 301H, 302 or 302H, and 204.
  - C. Students who plan to use biology or geological sciences courses to fulfill requirement 7 must complete Physics 302K, 102M, 302L, and 102N or an equivalent sequence; those who plan to use chemistry or physics must complete Physics 301, 101L, 316, and 116L.
  - D. Computer Science 303E or the equivalent.
  - E. Biology 311C and 311D, and 206L or 208L.
  - F. Three semester hours of coursework in geological sciences.
  - G. Three semester hours of coursework in astronomy or marine science.
  - H. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic: 1 *Research Methods: UTeach*), or Physics 341 (Topic: 7 *Research Methods: UTeach*).
7. One of the following concentrations:
  - A. Mathematics: Twelve semester hours of coursework chosen from Mathematics 325K or 328K; 341 or 340L; 358K; and either 360M or 375D (Topic: *Discovery: Introduction to Advanced Study in Mathematics*).
  - B. Biology: Twelve hours of coursework chosen from Biology 320, 325, 226L, 326R, 365R, 370, 373, and either 324 and 124L or 322 and 122L.
  - C. Chemistry: Twelve hours of coursework chosen from Chemistry 220C, 320M, 320N, 353, 455, and either 339K and 339L or 369.
  - D. Geological sciences: Twelve hours of coursework chosen from Geological Sciences 404C or 405, 416K, 416M, 420K or 320L, and 335.
  - E. Physics: Twelve hours of coursework chosen from Physics 315, 115L, 329, 333, 336K, 338K, 352K, 355, and 373.
8. Enough additional coursework to make a total of at least 126 semester hours.

## Special Requirements

Students must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in the supporting course in

requirement 2 and in each of the professional development courses listed in requirement 3, 4, and 5. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate and be recommended for certification, students must have a University grade point average of at least 2.50 and must pass the final teaching portfolio review. Information about the portfolio review and additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

## Bachelor of Science in Mathematics

As an alternative to the Bachelor of Arts degree, the Bachelor of Science in Mathematics is designed with a twofold purpose: to offer students a more extensive scientific program that may better prepare them for graduate study or employment, and to recognize students who choose to pursue a more demanding program. Students are given the opportunity to develop greater breadth and depth in their mathematical programs as well as to combine mathematics with a concentration in another scientific discipline.

To accomplish these goals, the minimum number of semester hours is increased and the maximum limit is removed. Specialization in one additional scientific area is encouraged, and the foreign language requirement is shortened by one semester.

Students seeking the Bachelor of Science in Mathematics must select one of six options: actuarial science, applied mathematics, mathematical sciences, pure mathematics, mathematics for secondary teaching, and mathematics honors. Students who choose the option in mathematical sciences must also select a specialization in either scientific computation or statistics, probability, and data analysis. Students who plan to follow option VI, mathematics honors, must be admitted to the Dean's Scholars Honors Program (p. 481).

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Mathematics must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I–IV: One of the following foreign language/culture choices:
  - A. Second-semester-level proficiency in a foreign language course.
  - B. First-semester-level proficiency in a foreign language and a three-semester-hour course in the culture of the same language area.

- C. Two three-semester-hour culture courses chosen from one foreign culture category from an approved list in the dean's office and college advising centers. Students in options V and VI are exempt from this requirement.
- 3. Forty-two semester hours of upper-division coursework. At least twenty-one semester hours of upper-division coursework must be completed in residence at the University.
- 4. Eighteen semester hours in mathematics must be completed in residence at the University.

- 8. Thirty-two semester hours of upper-division coursework in mathematics, consisting of the following courses. The student should consult the applied mathematics adviser for information on other courses that may be counted toward this requirement.
  - A. Mathematics 340L or 341.
  - B. Mathematics 427K, 348, 362K, and 374M.
  - C. Mathematics 361 and 365C.
  - D. Mathematics 343K or 373K.
  - E. Enough of the following coursework to provide a total of at least thirty-two hours: Mathematics 346, 365D, 368K, 372K, 376C.
- 9. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, and engineering courses may not be used to fulfill this requirement.
- 10. Enough additional coursework to make a total of 126 semester hours.

## Additional Prescribed Work for Each Option

### Option I: Actuarial Science

- 5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
- 6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
- 7. Actuarial Foundations 329.
- 8. Economics 304K and 304L.
- 9. Accounting 310F or both 311 and 312.
- 10. Finance 357.
- 11. At least thirty-two semester hours of upper-division coursework in mathematics and supporting areas, consisting of
  - A. One of the following courses: Mathematics 328K, 343K, 361, 361K, 365C, 367K, 373K.
  - B. Mathematics 340L or 341.
  - C. Mathematics 362K and either 358K or 378K.
  - D. Mathematics 339J, 339U, and two courses chosen from Mathematics 339V, 339W, 349P, and 349R.
  - E. Enough additional coursework to provide a total of at least thirty-two hours. In addition to upper-division mathematics courses, the following courses in supporting areas may be counted toward this requirement: Economics 420K, Finance 354, 367, 377 (Topic 2: *Financial Risk Management*), Legal Environment of Business 320F, 323, Management Information Systems 325, Risk Management 357E, 369K, 377. Courses used to satisfy this requirement may not be counted toward requirement 12.
- 12. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, engineering courses, and courses counted toward requirement 11e may not be used to fulfill this requirement.
- 13. Enough additional coursework to make a total of 126 semester hours.

### Option II: Applied Mathematics

- 5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
- 6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
- 7. Computer Science 303E or the equivalent.

### Option III: Mathematical Sciences

#### Specialization in Statistics, Probability, and Data Analysis

- 5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
- 6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
- 7. Computer Science 303E or the equivalent.
- 8. At least thirty-two semester hours of upper-division coursework in mathematics and related areas, consisting of
  - A. Mathematics 325K or Computer Science 336.
  - B. Mathematics 427K and 362K.
  - C. Mathematics 340L or 341.
  - D. Mathematics 361K or 365C.
  - E. Mathematics 358K and 378K.
  - F. Mathematics 328K, 343K, 346, or 373K.
- G. Additional coursework chosen from the following: Computer Science 327E or 347, Economics 341K, 350K (Topic 4: *Advanced Econometrics*), 350K (Topic 6: *Advanced Microeconomic Theory*), 350K (Topic 7: *Applied Economic Analysis*), 354K, Electrical Engineering 366L, 379K (Topic 15: *Information Theory*), Geography 360G, 360L, Mathematics 339J, 339U, 339V, 343L, 343M, 346, 348, 349P, 349R, 365D, 368K, 373L, 374G, 374M, Mechanical Engineering 366L, 366Q, 366R, 367S, Psychology 325K, Risk Management 357E. Courses used to satisfy this requirement may not be counted toward requirement 9. Most of these courses have substantial prerequisites, sometimes including courses in other departments. Some have restricted enrollment. The student is responsible for meeting prerequisites and other requirements for enrollment in the courses selected to fulfill this requirement. Courses should be chosen in consultation with the specialization adviser to form a coherent program consistent with the student's background and goals.

Educational Psychology 371 may not be counted toward this degree if it is taken after Mathematics 358K or 378K.



9. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, engineering courses, and courses counted toward requirement 8g may not be used to fulfill this requirement.
10. Enough additional coursework to make a total of 126 semester hours.

### Specialization in Scientific Computation

Students who complete this specialization may simultaneously fulfill some of the requirements of the Elements of Computing Certificate or the Certificate in Scientific Computation. These certificate programs are described in Transcript-Recognized Certificate Programs (p. 484).

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. One of the following sequences: Statistics and Scientific Computation 318 and 222; Computer Science 312 and 314; or Computer Science 303E and 313E.
8. At least thirty-two semester hours of upper-division coursework in mathematics and related areas, consisting of
  - A. Mathematics 340L or 341.
  - B. Mathematics 427K, 348, 362K, and 368K.
  - C. Mathematics 361K or 365C.
  - D. Students who fulfill the requirements of the Elements of Computing Certificate or the Certificate in Scientific Computation may count up to six hours of upper-division certificate coursework toward this requirement. Computer Science 323E may not be counted toward this requirement. Courses used to satisfy this requirement may not be counted toward requirement 9.
  - E. Additional coursework chosen from the following: Mathematics 325K or 328K (but not both), 427L, 343K or 373K (but not both), 343L, 346, 358K, 361, 365D, 372K, 374M, 376C, 378K.
9. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, engineering courses, and courses counted toward requirement 8e may not be used to fulfill this requirement.
10. Enough additional coursework to make a total of 126 semester hours.

### Option IV: Pure Mathematics

5. Eight semester hours in one of the following areas: astronomy, biology, chemistry, geological sciences, and physics.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. At least thirty-two semester hours of upper-division coursework in mathematics, consisting of
  - A. Mathematics 340L or 341.
  - B. Mathematics 427K, 361, 362K, 365C, and 373K.

- C. One of the following two-course sequences: Mathematics 427K and 372K, 358K and 378K, 362K and 339J, 348 and 368K, 365C and 365D, 367K and 365G, 367K and 367L, 373K and 373L.
- D. Additional hours of upper-division coursework in mathematics chosen with the approval of the mathematics adviser. Either Mathematics 343K or 361K may be counted toward this requirement, but not both.

8. At least six semester hours of upper-division coursework must be outside both mathematics and the fields of study listed in requirement 5. Philosophy courses in logic, computer science courses in discrete mathematics, and engineering courses may not be used to fulfill this requirement.
9. Enough additional coursework to make a total of 126 semester hours.

### Option V: Teaching

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school mathematics teacher in Texas; the student chooses mathematics certification or mathematics, physical science, and engineering certification. However, completion of the course requirements does not guarantee the student's certification. For information about additional certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

Students are encouraged to become familiar with a variety of mathematical software relevant to middle grades or secondary teaching, such as computer geometry systems, spreadsheets, and statistical software. Whenever possible, the student should take courses and sections of courses that use these types of software.

5. History 329U or Philosophy 329U.
6. Mathematics 408C and 408D, or 408N, 408S, and 408M.
7. At least six semester hours of upper-division coursework must be outside mathematics. Philosophy courses in logic, computer science courses in discrete mathematics, and engineering courses may not be used to fulfill this requirement.
8. Mathematics 315C.
9. Biology 337 (Topic 2: *Research Methods: UTeach*), Chemistry 368 (Topic 1: *Research Methods: UTeach*) or Physics 341 (Topic 7: *Research Methods: UTeach*).
10. The requirements of one of the following certification areas:
  - A. For mathematics certification: At least thirty-two semester hours of upper-division coursework in mathematics consisting of:
    - i. Mathematics 340L or 341.
    - ii. Mathematics 325K or 328K, 333L, 358K, and 362K.
    - iii. Mathematics 360M or 375D (Topic: *Discovery: Introduction to Advanced Study in Mathematics*).
    - iv. Mathematics 361K or 365C.
    - v. Mathematics 343K or 373K.
    - vi. Mathematics 427K or 378K.
    - vii. Enough of the following coursework to provide a total of at least thirty-two semester hours: Mathematics 427K, 328K, 339J, 339U, 343K, 343L, 348, 360M, 361, 365C, 365D, 368K, 373K, 373L, 175T (Topic: *Seminar for Prospective Teachers*), 375D (Topic: *Discovery: Introduction to Advanced*

*Study in Mathematics*), 378K. A course used to fulfill requirements 10i through 10vi may not also be counted toward requirement 10vii.

- viii A three-semester-hour supporting course that uses mathematics but is in a field other than mathematics. The following courses may be used to fulfill this requirement: Accounting 310F or 311, Architectural Engineering 323K, Astronomy 307, 352K, 352L, 358, 367M, Chemistry 301 or 301H, 303, Civil Engineering 321, 341, Computer Science 303E and 313E, Economics 420K, Electrical Engineering 302, 366, 366L, Geological Sciences 346C, 354, 476K, Geography 360L, Government 341M, Human Development and Family Sciences 322, Mechanical Engineering 320, 326, 366L, 366Q, 366R, Petroleum and Geosystems Engineering 310, Physics 301, 303K, 303L, Psychology 325K, 332, Sociology 369L. The supporting course may not also be counted toward other requirements in the prescribed work.

B. For mathematics, physical science, and engineering certification:

- i Mathematics 325K, 427K, 328K, 333L, 341, 358K, and 362K.
- ii Mathematics 361K or 365C.
- iii Mathematics 360M or 375D (Topic: *Discovery: Introduction to Advanced Study in Mathematics*).
- iv Physics 301, 101L, 316, 116L, 315, and 115L.
- v Chemistry 301 or 301H, 302 or 302H, and 204.
- vi Chemical Engineering 379 (Topic: *Fundamentals of Engineering and Design*), 379 (Topic: *Engineering Energy Systems*), and Mechanical Engineering 379M (Topic: *Design of Machines and Systems*).

11. Eighteen semester hours of professional development coursework consisting of:
  - a. Curriculum and Instruction 650S.
  - b. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
  - c. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.
  - d. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
  - e. UTeach-Natural Sciences 101, 110, and 170.
12. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
13. Enough additional coursework to make a total of at least 126 semester hours.

## Option VI: Mathematics Honors

5. Breadth requirement: An honors mathematics course; one of the following two-semester sequences: Biology 315H and 325H, Chemistry 301H and 302H, or Physics 301, 101L, 316, and 116L; and nine additional semester hours chosen from the preceding

courses, Computer Science 315H, and Physics 315 and 115L. Credit earned by examination may not be counted toward this requirement.

6. An honors section of Mathematics 427K, and six semester hours of coursework chosen from Mathematics 365C, 367K, and 373K.
7. Twenty additional semester hours of upper-division coursework in mathematics approved by the departmental faculty adviser.
8. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Mathematics 379H.
11. Thirty additional semester hours of coursework approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

## Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in the supporting course in requirement 5 and in each of the professional development courses listed in requirement 11 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 12. For information about the portfolio review and additional teacher certification requirements, students should consult the UTeach-Natural Sciences academic adviser.

To graduate under option VI, students must remain in good standing in the Dean's Scholars Honors Program, must submit an honors thesis approved by the departmental honors adviser, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Bachelor of Science in Medical Laboratory Science

The student preparing for a career in medical laboratory science completes at least one hundred hours of academic work at the University. After this work is completed, the student enters an accredited school of medical laboratory science (or clinical laboratory science) for an additional twelve to sixteen months of clinical education. After completion of this education, the student is awarded the Bachelor of Science in Medical Laboratory Science and is eligible for national certifying examinations administered by the American Society for Clinical Pathology (ASCP). Successful completion of these

exams results in national certification as a medical laboratory scientist or medical technologist.

The purpose of this degree program is to meet the increasing demand for laboratory professionals in hospital and clinic laboratories, research, industry, public health, education, and laboratory management. Medical laboratory science is also an excellent foundation for graduate study in medicine, dentistry, management, education, and other disciplines.

## Prescribed Work

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Medical Laboratory Science must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule*, available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. One of the following foreign language/culture choices.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. Mathematics 408C or 408N.
4. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 328M or Mathematics 316 or Statistics and Scientific Computation 304; Biology 330 or 446L, 226L, 326M, 337 (Topic: Introduction to Health Informatics), 337 (Topic: Fundamentals of Health Information Technology), 344 or 366R, 360K, 160L, 361, 361L, and 365S.
5. Chemistry 301 or 301H, 302 or 302H, 204, 220C, 320M, 320N, and 369.
6. Enough additional elective coursework, if necessary, to make a total of at least one hundred semester hours of academic work completed at the University before the clinical education program.
7. Twelve to sixteen months of clinical education in a program of medical laboratory science (or clinical laboratory science) accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The student must apply to and be accepted into a clinical education program. The faculty adviser in the School of Biological Sciences and the clinical education program director work closely with each student to ensure his or her success in the program. Upon completion of the clinical education program, the student must submit a letter from the program director verifying completion of coursework and a transcript showing grades in all courses in the program to The University of Texas at Austin, Office of the Dean, College of Natural Sciences, 1 University Station G2500, Austin TX

78712. To be counted toward the degree, the coursework must be approved by the faculty adviser for medical laboratory science in the School of Biological Sciences and the dean. None of the coursework completed in the clinical education program may be used to fulfill in-residence degree requirements, requirements 1 through 6 of the prescribed work above, or the requirements for a second bachelor's degree.

## Special Requirements

Students must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

## Order and Choice of Work

The student should consult with his or her academic and faculty advisers each semester regarding order and choice of work and balancing the laboratory load. To complete the program within four years, it may be necessary for the student to take some courses during the summer.

## Bachelor of Science in Neuroscience

The Bachelor of Science degree in Neuroscience provides a strong foundation in the core sciences and related mathematical disciplines, along with a three-course specialization in one of six areas: biology, chemistry, computer science, mathematics, physics, or psychology. Distinctive features of the program include an emphasis on developing the quantitative, statistical, mathematical, and computational skills required in neuroscience, and meaningful hands-on laboratory experience.

## PRESCRIBED WORK

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Neuroscience must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Mathematics 408C and 408D, or 408N, 408S, and 408M; Mathematics 362K or Statistics and Scientific Computation 321.
3. An eight-semester-hour sequence of coursework in physics chosen from the following: Physics 301, 101L, 316, and 116L; 303K, 103M, 303L, and 103N; 317K, 117M, 317L, and 117N.
4. Chemistry 301 or 301H, 302 or 302H, and 204.

5. Biology 311C and 311D, or Biology 315H and 325H, and Biology 206L.
6. Three additional majors-level courses selected from one of the following supporting disciplines:
  - A. Biology: Biology 325 or 325H, 320, 344, and 349.
  - B. Chemistry: Chemistry 328M and 128K, 328N and 128L, 339K or 369, 353 or 353M.
  - C. Computer Science: Computer Science 312, 314, Statistics and Scientific Computation 335, 374E.
  - D. Mathematics: Mathematics 427K, 340L or 341, 358K or 378K, Statistics and Scientific Computation 329C. Students who chose Statistics and Scientific Computation 321 for requirement 2, may not also count Mathematics 358K.
  - E. Physics: Physics 345, 338K, 355.
  - F. Psychology: Psychology 301, 323, 353K, 355.
7. Neuroscience 330 or Biology 365R, and Neuroscience 335.
8. Neuroscience 366M and 366N.
9. Twelve-semester-hours of laboratory courses chosen from the following: Biology 365L, 366L, 366P, 366S, and 377. The same section of Biology 377, *Undergraduate Research* may not count toward requirement 11 if used to fulfill this requirement.
10. Six-semester-hours of upper-division neuroscience to be chosen from: Biology 337 (Topic: *Evolutionary Neuroscience*), 337 (Topic: *Sensory Neuroscience*), 337 (Topic: *Genetic Analysis of Behavior and Disease*), 337 (Topic: *Computational Neuroscience*), 337 (Topic: *Foundations of Neuroimaging*), 337 (Topic: *Visual Neuroscience*), 359K, 365N, 365T, 365W, 366C, 366D, 366F.
11. Three additional semester hours of either Biology 377 (Undergraduate Research) or 379H (Honors Tutorial Course). The research topic in Biology 377 or 379H must relate to neuroscience and be approved in advance by the faculty adviser.
12. At least twenty-one semester hours of upper-division coursework, including eighteen semester hours in biology and neuroscience, must be completed in residence at the University. All students must complete at least thirty-six semester hours of upper-division coursework.
13. Enough additional coursework to make a total of 120 semester hours.

life processes but also the links between life science and health, behavior, education, population, culture, and economics. The Bachelor of Science in Nutrition degree program includes six options, described below.

For students pursuing careers in dietetics, courses in behavioral and clinical nutrition and food systems management provide the academic preparation required for dietetics practice. The Didactic Program in Dietetics (DPD) meets the coursework requirements that qualify graduates to apply to a dietetic internship, which leads to the Registered Dietitian credential. Completion of the Didactic Program in Dietetics requirements qualifies a graduate to apply for the exam to become a Dietetic Technician, Registered. To be eligible to apply for a dietetic internship or to practice as a Registered Dietetic Technician, additional coursework would be required for students earning a degree in Options II-VI. The Coordinated Program in Dietetics (CPD) includes both the coursework and the supervised practice necessary to be eligible to write the examination to become a registered dietitian. The DPD and CPD are accredited by the Commission on Accreditation of Dietetics Education of the American Dietetic Association (ADA), 120 S. Riverside Plaza, Suite 2000, Chicago IL 60606, (800) 877-1600.

The nutritional sciences option requires courses in science and research in order to prepare students for graduate study or professional school. Graduates may seek employment in private or publicly funded research programs or, upon completion of graduate study, may engage in college or university teaching or nutrition research. This option also allows students to fulfill requirements for postgraduate study in medicine, dentistry, and other health professions. Additional coursework is needed to be eligible to apply for a dietetic internship or to practice as a Dietetic Technician, Registered.

Students who select the nutrition in business option may earn a Business Foundations Certificate and seek employment in areas such as sales and customer support in the food industry.

Students who plan to follow option IV must be admitted into the Honors in Advanced Nutritional Sciences Program (p. 481). Students in this option take honors courses in nutrition, research methodology, and writing. In addition, students are encouraged to take honors courses in disciplines outside of nutrition, such as biology, chemistry, and mathematics. Students consult with the departmental honors adviser to develop an individualized and challenging program of study that meets their goals and interests.

Students who plan to follow option V must be admitted to the Dean's Scholars Honors Program (p. 481). In addition to taking a core of research, writing, and seminar courses in the College of Natural Sciences, students in this option consult with the departmental honors adviser to develop a coherent individual program of rigorous and challenging courses from across the University.

Students in the international nutrition option gain firsthand knowledge of nutrition issues in other countries through a study abroad experience. Students combine the study of nutrition with a broad range of courses to prepare for experience studying and practicing nutrition in another culture.

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

## Special Requirements

Students must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* (<http://catalog.utexas.edu/undergraduate/natural-sciences/degrees-and-programs/bs-neuroscience/>) available at <http://registrar.utexas.edu/catalogs/>.

## Bachelor of Science in Nutrition

Nutrition is an integrative science with the overall objective of improving the health and well-being of individuals and groups. Nutritional inquiry encompasses not only the roles of electrons, atoms, molecules, genes, cells, organs, and complex organisms in biological



In addition, students seeking the Bachelor of Science in Nutrition must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule* available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. At least thirty-six semester hours of upper-division coursework, of which at least twenty-four must be in nutrition. At least twenty-one semester hours of upper-division coursework, including eighteen semester hours in nutrition, must be completed in residence at the University.

## Additional Prescribed Work for Each Option

### Option I: Dietetics

Students in dietetics may select either the Didactic Program in Dietetics (DPD) or the Coordinated Program in Dietetics (CPD). Students who complete the DPD with at least four upper-division nutrition courses completed in residence will receive a Verification Statement that qualifies them to apply for an accredited dietetic internship. DPD graduates who complete a dietetic internship may become active members of the American Dietetic Association (ADA) and are eligible to write the examination to become a registered dietitian.

Students interested in the Coordinated Program in Dietetics (p. 479) must apply for admission after completing sixty semester hours of prerequisite coursework. Upon completing the CPD, which includes approximately twelve hundred hours of supervised practice, graduates immediately qualify for active membership in the ADA and to write the examination to become a registered dietitian.

Students who are admitted to the CPD should consult the faculty adviser each semester regarding order and choice of work. During the fourth year, the following courses must be taken in the indicated term: *fall semester*: Nutrition 245C; *spring semester*: Nutrition 372C, 372F, 373S; *summer session*: Nutrition 374C and 374P. Because these courses are taught only once a year, a student who does not take them at the indicated time may be unable to complete the program.

3. At least three semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 or 313H and 113L.
4. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
5. Three semester hours of statistics chosen from Statistics and Scientific Computation 302, 303, 304, 305, 306, and 325H.
6. Chemistry 301 or 301H, 302 or 302H, 204, 320M, and either 369 or both 339K and 339L.
7. Biology 311C or 315H, 325 or 325H, and 365S.
8. Accounting 310F or 311.
9. The following core nutrition coursework:

- A. Nutrition 312 or 312H, 112L or 312R, 326, and 126L. Students who complete Biology 315H and 325H are exempt from Nutrition 326 and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
- B. Nutrition 307, 107L, 338W or 338H, 342, and 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*). Students in the CPD must complete Nutrition 371 instead of 365.

10. Coursework in nutrition, consisting of the following:
  - A. Behavioral and clinical nutrition:
    - i CPD: Nutrition 315, 218, 118L, 330, 332, and 370.
    - ii DPD: Nutrition 315, 218, 118L, 332, 370, 371, and either Nutrition 330 or 365 (Topic 2: *Nutrition and Genes*).
  - B. Food systems management: Nutrition 334, 234L, and 355M.
  - C. Research:
    - i CPD: Nutrition 373S.
    - ii DPD: One of the following: Nutrition 324 and 124L, 353, 355 or 355H, 366L, 379H, Statistics and Scientific Computation 318, 321, 325H, or 352. With the approval of the faculty undergraduate adviser, DPD students may count Nutrition 352 toward this requirement. Statistics and Scientific Computation 325H may not be counted toward both requirement 5 and requirement 10cii.
  - D. Professional development:
    - i CPD: Nutrition 245C.
    - ii DPD: Nutrition 162.

11. Students in the CPD must complete an additional fifteen semester hours of supervised practice: Nutrition 345M, 372C, 372F, 374C, and 374P.
12. Enough additional coursework to make a total of 126 semester hours.

### Option II: Nutritional Sciences

3. At least six semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 or 313H, and 113L.
4. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
5. Three semester hours of statistics chosen from Statistics and Scientific Computation 302, 303, 304, 305, 306, and 325H.
6. Chemistry 301 or 301H, 302 or 302H, 204, 220C, 320M, 320N, and either 369 or both 339K and 339L.
7. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 365R and 365S.
8. One of the following four-semester-hour sequences: Physics 301 and 101L, 302K and 102M, 303K and 103M, or 317K and 117M.
9. The following core nutrition coursework:

- A. Nutrition 312 or 312H, 112L or 312R, 326, and 126L. Students who complete Biology 315H and 325H are exempt from Nutrition 326 and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
  - B. One of the following four-semester-hour sequences: Nutrition 307 and 107L; Biology 326M and 226L; 326R and 226L; Chemistry 455.
  - C. Nutrition 338W or 338H, 342, and 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*).
10. Twelve additional semester hours of nutrition, including the following:
- A. Nutritional sciences: Nutrition 365 or 371. The same topic of Nutrition 365 may not be counted both toward this requirement and toward requirement 9c.
  - B. Behavioral and clinical nutrition: Nutrition 315, 218 and 118L, 330, 332, 360, or 370.
  - C. Research: Three semester hours of coursework chosen from Nutrition 355H, 366L, Biology 325L, 331L, and Chemistry 369L.
11. Enough additional coursework to make a total of 126 semester hours.

### Option III: Nutrition in Business

- 3. At least six semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 or 313H, and 113L.
- 4. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
- 5. Three semester hours of statistics chosen from Statistics and Scientific Computation 302, 303, 304, 305, 306, and 325H.
- 6. Chemistry 301 or 301H, 302 or 302H, 204, 320M, and either 369 or both 339K and 339L.
- 7. Biology 311C or 315H, 325 or 325H, and 365S.
- 8. The following core nutrition coursework:
  - A. Nutrition 312 or 312H, 112L or 312R, 326, and 126L. Students who complete Biology 315H and 325H are exempt from Nutrition 326 and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
  - B. One of the following four-semester-hour sequences: Nutrition 307 and 107L; Biology 326M and 226L; 326R and 226L.
  - C. Nutrition 338W or 338H, 342, and 365 (Topic 1: *Vitamins and Minerals*; Topic 2: *Nutrition and Genes*; or Topic 3: *Epidemiological and Statistical Methods in Nutrition*).
- 9. At least seventeen additional semester hours of nutrition, including the following:
  - A. Behavioral and clinical nutrition: Six hours chosen from Nutrition 315, 218 and 118L, 330, 332, 370, and 371.
  - B. Food systems management: Nutrition 334 and 234L.

- C. Research: Nutrition 324 and 124L, 353, 355 or 355H, 366L, or 379H. With departmental approval, students in option III may substitute Nutrition 352.

- 10. Fifteen semester hours chosen from Accounting 310F or 311, Advertising 305 or 318J, Communication Studies 316L, Finance 320F, Human Development and Family Sciences 322, Legal Environment of Business 320F, Management 320F, 325, Management Information Systems 302F, Marketing 320F, and Nutrition 355M.
- 11. Enough additional coursework to make a total of 126 semester hours.

### Option IV: Honors in Advanced Nutritional Sciences

- 3. At least three semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 or 313H and 113L.
- 4. One of the following calculus courses: Mathematics 408C, 408N, Mathematics 408D-AP-H, or the equivalent.
- 5. Three semester hours of statistics chosen from Statistics and Scientific Computation 302, 303, 304, 305, 306, and 325H.
- 6. Chemistry 301 or 301H, 302 or 302H, 204, 320M, 320N, 220C, and either 369 or both 339K and 339L.
- 7. Biology 311C, 311D, and 325 or Biology 315H and 325H; and Biology 365S.
- 8. Nutrition 312H, 312R, 338H, 342, 365 (Topic 1: *Vitamins and Minerals*), and fourteen additional semester hours of nutrition or related coursework approved by the departmental honors adviser.
- 9. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
- 10. Nutrition 355H and 379H.
- 11. Ten semester hours of additional coursework approved by the departmental honors adviser.
- 12. Enough additional coursework to make a total of 120 semester hours.

### Option V: Nutrition Honors

- 3. Breadth requirement: A calculus course and a statistics course, one of which must be a designated honors course; Biology 315H and 325H; Chemistry 301H and 302H; and three additional hours of honors-designated or approved coursework in biology, chemistry, computer science, mathematics, statistics and scientific computation, or physics. Credit earned by examination may not be counted toward this requirement.
- 4. At least three semester hours chosen from Psychology 301, Sociology 302, Anthropology 302, Economics 304K, 304L, and Human Development and Family Sciences 313 or 313H and 113L.
- 5. Chemistry 204, 320M, and 320N, and either 369 or both 339K and 339L.
- 6. Biology 365R and 365S.
- 7. Nutrition 312H, 312R, 338H, 342, and 365 (Topic 1: *Vitamins and Minerals*).

8. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
10. Nutrition 355H and 379H.
11. Ten semester hours of additional coursework in nutrition or related area approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

## Option VI: International Nutrition

Students in this option must participate for one semester or summer session in a study abroad program in nutrition offered by the University. Students must submit a study abroad application. During the study abroad experience, students complete Nutrition 353, Field Experience in International Nutrition. Additional coursework in nutrition or in the language, culture, or history of the country may be available during the international study experience. All study abroad programs in nutrition must be approved in advance by the international nutrition faculty adviser. A list of other study abroad opportunities in nutrition is maintained in the main office of the School of Human Ecology.

3. Economics 304K or 304L, and at least three semester hours chosen from Psychology 301, Sociology 302, and Anthropology 302.
4. Six semester hours chosen from the following: Geography 339K, 357, Mexican American Studies 307, 318, Sociology 335, 354K.
5. Second-semester proficiency in a single foreign language.
6. One of the following calculus courses: Mathematics 408C, 408N, or the equivalent.
7. Three semester hours of statistics chosen from Statistics and Scientific Computation 302, 303, 304, 305, 306, and 325H.
8. Chemistry 301 or 301H, 302 or 302H, 204, 320M, and 369.
9. Biology 311C or 315H, 325 or 325H, and 365S.
10. The following core nutrition coursework:
  - A. Nutrition 312 or 312H, 112L or 312R, 326, and 126L. Students who complete Biology 315H and 325H are exempt from Nutrition 326 and 126L. The student must complete each course with a grade of at least C- before progressing to other upper-division nutrition courses.
  - B. One of the following four-semester-hour sequences: Nutrition 307 and 107L; Biology 326M and 226L; 326R and 226L.
  - C. Nutrition 338W or 338H, and 342.
11. Nutrition 316, 218, 118L, 321, 331, and 353.
12. At least nine semester hours, three of which must be upper-division, chosen from one of the following areas:
  - A. Health professions: Chemistry 220C, 320N, Biology 206L, 311D, 326M, 346, Nutrition 365 (Topic 1: Vitamins and Minerals). Biology 326M may not be counted toward both requirement 10b and requirement 12a.
  - B. Dietetics: Nutrition 315, 330, 332, 370, 371.

- C. Behavioral science: Human Development and Family Sciences 304 or 304H, 313 or 313H, 113L, Psychology 308, 319K, Sociology 308D, 319, 320K, 324K .

13. Enough additional coursework to make a total of 126 semester hours.

## Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate under option IV, students must remain in good standing with an overall grade point average of at least 3.30 and an overall grade point average of 3.50 in all nutritional sciences courses. In addition, student research conducted in courses described in requirement 10 must be presented in an approved public forum, such as the college's annual Undergraduate Research Forum. Students who fail to maintain the required grade point average may be subject to dismissal from the program. Under special circumstances and at the discretion of the nutritional sciences honors adviser, a student may be allowed to continue under academic review.

To graduate under option V, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 10, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

### Note:

Nutritional Sciences courses with numbers ending in H are intended for students in option IV, Honors in Advanced Nutritional Sciences and in option V, Nutrition Honors. Students outside these options may enroll in these courses with the consent of the nutritional sciences honors adviser.

To be eligible to apply for a dietetic internship or to practice as a Registered Dietetic Technician, additional coursework would be required for students earning a degree in options II-VI.

## Bachelor of Science in Physics

All aspects of the physical universe are of interest to the physicist, who seeks to understand not only the smallest forms of matter and the rich phenomena present in our everyday lives but also the universe itself. Physics has played a critical role in human technological and intellectual development during the twentieth century. The tools of the physicist—observation, imagination, model building, prediction, and deduction—will enable physics to continue this influence into the new century. The Bachelor of Science in Physics degree program is designed to provide the skills, understanding, and outlook required for participation in the discovery of new knowledge about nature.

The Bachelor of Science in Physics program is balanced and broad. It is designed to give the student a strong foundation for graduate study or work in physics and, with additional training, for work in a variety of other areas, such as astronomy, astrophysics, biophysics, chemical physics, computer science, engineering, geophysics,

mathematics, medicine, physics teaching, and space sciences. Students who end their formal training with the bachelor's degree may seek employment in industry, in national laboratories, or in teaching; they should consider the options in computation, radiation physics, space sciences, biophysics, and teaching, which augment the broad instruction provided by the basic Bachelor of Science in Physics. For those who plan to teach physics in secondary school, the teaching option provides the courses needed for certification.

Students who plan to follow option VI, physics honors, must be admitted to the Dean's Scholars Honors Program (p. 481).

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum, described in chapter 2. The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Physics must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the Course Schedule (<http://registrar.utexas.edu/schedules>). They may be used simultaneously to fulfill other requirements, unless otherwise specified.
2. Options I–IV and VII: One of the following foreign language/culture choices. Students in options V and VI are exempt from this requirement.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
3. Thirty-six semester hours of upper-division coursework.
4. At least twenty-one semester hours of upper-division coursework, including at least twelve semester hours of upper-division coursework in physics, must be completed in residence at the University.
5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Physics 336K, 352K, 353L, 355, 362K, 362L, 369, 373, and 474, or their equivalents.
10. Enough additional coursework to make a total of 126 semester hours.

## Prescribed Work Common to All Options for Each

### Option I: Physics

This option is designed to give the student a strong foundation for graduate study or work in physics and for further study or work in a variety of other areas.

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.

### Option II: Computation

This option is designed to provide the necessary foundation and hands-on skill in computation for the student who plans a career or further study in computational physics or computer science. Students who complete this option may simultaneously fulfill some of the requirements of the Certificate in Scientific Computation (p. 485).

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics or statistics and scientific computation. Statistics and Scientific Computation 329C and Mathematics 362K are recommended. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Physics 329, 336K, 338K, 352K, 353L, 355, 369, and 373, or their equivalents.
10. One of the following scientific computation options:
  - A. Statistics and Scientific Computation 222, Computer Science 303E, and two of the following courses. The student must complete coursework from at least two of the following areas.
    - i Numerical methods: Chemical Engineering 348, Computer Science 323E, 323H, 367, Mathematics 348, Statistics and Scientific Computation 335.
    - ii Statistical methods: Biomedical Engineering 335, Mathematics 358K, 378K.
    - iii Other computing topics: Computer Science 324E, 327E, 329E, 377, Mathematics 346, 362M, 368K, 372K, 376C, Mechanical Engineering 367S, Statistics and Scientific Computation 329D, 374C, 374D, 374E.
  - B. Twelve semester hours chosen from Electrical Engineering 306, 312, 316, 319K, and 422C.
11. Enough additional coursework to make a total of 126 semester hours.



### Option III: Radiation Physics

This option is designed to provide the necessary foundation for the student who plans a career or further study in nuclear engineering, radiation engineering, or health physics.

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Twenty-four semester hours of upper-division coursework in physics, including Physics 336K, 352K, 353L, 355, 362L, 369, and 373, or their equivalents.
10. Sixteen semester hours of upper-division coursework in mechanical engineering, consisting of Mechanical Engineering 136N, 337C, 337F, 337G, 361E, and 361F.
11. Enough additional coursework to make a total of 126 semester hours.

### Option IV: Space Sciences

This option is designed to provide the necessary foundation for the student who plans a career or further study in space sciences.

5. Chemistry 302 or 302H.
6. Six semester hours in biology, geological sciences, or astronomy. A course may not be used to fulfill this requirement if it cannot be counted toward major requirements in the department that offers it.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K. Only courses at the level of calculus and above may be counted toward the total number of hours required for the degree.
9. Physics 329, 336K, 352K, 353L, 355, 362K, 369, and 373, or their equivalents.
10. Either fifteen semester hours of upper-division coursework in aerospace engineering or thirteen hours in aerospace engineering and three additional hours of upper-division coursework in physics.
11. Enough additional coursework to make a total of 126 semester hours.

### Option V: Teaching

This option is designed to fulfill the course requirements for certification as a middle grades or secondary school science teacher in Texas; the student chooses composite science certification with physics as the primary teaching field, physical sciences certification, physics/mathematics certification, or mathematics, physical science, and engineering certification. However, completion of the course

requirements does not guarantee the student's certification. For information about additional requirements, students should consult the UTeach-Natural Sciences academic adviser.

5. Physics 301, 101L, 316, 116L, 315, and 115L.
6. Mathematics 408C and 408D or the equivalent, 427K, and 427L.
7. At least eighteen semester hours of upper-division coursework in physics, consisting of Physics 341 (Topic 7: *Research Methods: UTeach*), 353L, 355, and three of the following courses: Physics 329, 333, 336K, 338K, 352K, 373, Science 360 (Topic 4: *Physics by Inquiry*). With the consent of the UTeach-Natural Sciences undergraduate adviser, an upper-division physics course that includes a substantial research component may be substituted for Physics 341.
8. History 329U or Philosophy 329U.
9. The requirements of one of the following certification areas:
  - A. For composite science certification:
    - i. Biology 311C and 311D.
    - ii. Chemistry 301 or 301H and 302 or 302H.
    - iii. Six hours of coursework in geological sciences; courses intended for non-science majors may not be counted toward this requirement.
    - iv. Enough additional approved coursework in biology, chemistry, or geological sciences to provide the required twelve hours in a second field.
  - B. For physical sciences certification:
    - i. Chemistry 301 or 301H, 302 or 302H, 204 or 317, 353, 153K, 154K, 354L, and 455 or 456.
    - ii. Three additional hours of upper-division coursework in physics.
  - C. For physics/mathematics certification: Mathematics 315C, 325K, 333L, 341 or 340L, 358K, 362K, 360M or 375D.
  - D. For mathematics, physical science, and engineering certification:
    - i. Mathematics 315C, 325K, 333L, 358K, and 362K.
    - ii. Chemistry 301 or 301H, 302 or 302H, and 204.
    - iii. Chemical Engineering 379 (Topic: *Fundamentals of Engineering and Design*), 379 (Topic: *Engineering Energy Systems*), and Mechanical Engineering 379M (Topic: *Design of Machines and Systems*).
10. Eighteen semester hours of professional development coursework consisting of:
  - A. Curriculum and Instruction 650S
  - B. Curriculum and Instruction 365C or UTeach-Natural Sciences 350.
  - C. Curriculum and Instruction 365D or UTeach-Natural Sciences 355.
  - D. Curriculum and Instruction 365E or UTeach-Natural Sciences 360.
  - E. UTeach-Natural Sciences 101, 110, and 170.

11. Students seeking middle grades certification must complete the following courses: Educational Psychology 363M (Topic 3: *Adolescent Development*), or Psychology 301 and 304; and Curriculum and Instruction 339E.
12. Enough additional coursework to make a total of at least 126 semester hours.

A list of recommended biology laboratory courses that complement the lecture courses listed in 11a through 11e are available in the advising center and the dean's office.

12. Enough additional coursework to make a total of 126 semester hours.

## Option VI: Physics Honors

5. Breadth requirement: Biology 315H and 325H, Chemistry 301H and 302H, and Mathematics 427K and 427L; at least one of the math courses must be a designated honors section. Credit earned by examination may not be counted toward this requirement.
6. Mathematics 340L and 361.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Physics 336K, 352K, 353L, 355, 362K, 362L, 369, 373, and 474.
9. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
10. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
11. Physics 379H and a three-semester-hour upper-division research course approved by the departmental honors adviser.
12. Ten additional semester hours of coursework approved by the departmental honors adviser.
13. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
14. Enough additional coursework to make a total of 120 semester hours.

## Option VII: Biophysics

5. Chemistry 301 or 301H and 302 or 302H.
6. Either Biology 311C, 311D, and 325 or Biology 315H and 325H; Biology 206L.
7. Physics 301, 101L, 316, 116L, 315, and 115L.
8. Mathematics 408C and 408D or the equivalent, 427K and 427L, and six additional semester hours of upper-division coursework in mathematics. The following courses are recommended: Mathematics 340L, 361, and 362K.
9. Physics 336K, 345, 352K, 353L, 355, 369, and 373 or their equivalents.
10. Either Chemistry 320M or 328M, and either Chemistry 339K or 369. Students choosing to take Chemistry 339K must also take 339L.
11. Complete one of the following areas:
  - A. Cell Biology: Biology 320.
  - B. Microbiology: Biology 326R.
  - C. Developmental Biology: Biology 349.
  - D. Neurobiology: Either Biology 365R or 371M.
  - E. Virology: Biology 330.
  - F. Computation: Statistics and Scientific Computation 335 and Biology 337J or Statistics and Scientific Computation 339 (Topic: *Computational Biology*) or (Topic: *Computational Chemistry*).

## Special Requirements

Students in all options must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

To graduate and be recommended for certification, students who follow the teaching option must have a University grade point average of at least 2.50. They must earn a grade of at least C- in the supporting course in requirement 8 and in each of the professional development courses listed in requirement 10 and must pass the final teaching portfolio review; those seeking middle grades certification must also earn a grade of at least C- in each of the courses listed in requirement 11. Information about the portfolio review and additional teacher certification requirements is available from the UTeach-Natural Sciences academic adviser.

To graduate under option VI, students must remain in good standing in the Dean's Scholars Honors Program, must earn grades of at least A- in the departmental research and thesis courses described in requirement 7 above, and must present their research in an approved public forum, such as the college's annual Undergraduate Research Forum.

## Bachelor of Science in Public Health

The Bachelor of Science in Public Health prepares graduates for entry-level positions in public health and equips them to pursue certificate and graduate degrees in the field. The degree offers broad-based training in the five core areas of public health, with a choice of six areas of specialization.

Students for whom the degree is appropriate include those interested in health careers and in dual graduate degree programs in medicine and public health. The degree is administered by the School of Biological Sciences.

Students who plan to follow option I must be admitted. Students who plan to follow option III must first gain admission to option I, and then apply for admission to option III. Students who plan to follow option II must be admitted to the Dean's Scholars Honors Program (p. 481). Admission requirements for option I and II are given in The Major in Public Health (p. 479).

## Prescribed Work Common to All Options

All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.

In addition, students seeking the Bachelor of Science in Public Health must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

1. Foundation courses:
  - A. Public health: Public Health 317.
  - B. Microbiology: Biology 326M and 226L.
  - C. Nutrition and physiology: Nutrition 312 or 312H and Biology 365S.
  - D. Social and behavioral sciences: One of the following: Economics 304K, 304L, Psychology 301, Sociology 319, 354K.
  - E. Political science/government: Government 358 or Management 320F.
2. Public health core:
  - A. Biostatistics: Biology 328M or Statistics and Scientific Computation 328M.
  - B. Environmental health sciences: Public Health 338.
  - C. Epidemiology: Public Health 354.
  - D. Global health: Public Health 334.
  - E. Health policy and management: Public Health 358D.
  - F. Social and behavioral sciences: Public Health 368D.
3. Two courses with a writing flag. One of these courses must be upper-division. Courses with a writing flag are identified in the *Course Schedule*. They may be used simultaneously to fulfill other requirements, unless otherwise specified.
4. At least twenty-one semester hours of upper-division coursework must be completed in residence at the University. All students must complete at least thirty-six semester hours of upper-division coursework.

## Additional Prescribed Work for Each Option

### Option I: Public Health

5. Mathematics 408C or 408N.
6. Biology 311C, 311D, and 325 or Biology 315H and 325H. These courses must be completed before the student progresses to other upper-division biology and upper-division public health courses.
7. Chemistry 301 or 301H, 302 or 302H, 204, 320M, and 369.
8. At least nine hours from one of the following areas of specialization; courses counted toward requirement 1 may not be used to fulfill this requirement.
  - A. Biostatistics and public health informatics: Biology 321G, 337 (Topic: *Introduction to Health Informatics*), 337 (Topic: *Fundamentals of Health Information Technology*), Computer Science 303E, 329E (approved topics only), Geography 360G, Mathematics 408D or 408S, 340L, 358K, 362K, 362M, Public Health 341R.

- B. Environmental health sciences: Biology 337 (Topic: *Emerging Infectious Disease*), 375, 478T, Biomedical Engineering 301, Civil Engineering 341, 342, 346, 369L, Geological Sciences 302C, 307, 346C, 476K, 476M, Geography 334C, 339K, 356T (approved topics only), 357, 360G, Marine Science 307, 354Q, Public Health 341R.
- C. Health policy and management: Bridging Disciplines 329, Economics 304K, 304L, 330T (approved topics only), Government 335N (approved topics only), 357M (approved topics only), 358, 360N (Topic 10: *Introduction to International Relations*), 365N (Topic 9: *International Environmental Policy*), 370L (approved topics only), Human Development and Family Sciences 362, Management 320F, Philosophy 325L, 325M, 347, Public Affairs 310S (approved topics only), 325 (approved topics only), 330C, 330S (approved topics only), Public Health 341R, Sociology 354K.
- D. Infectious diseases and public health microbiology: Biology 329, 129L, 330, 230L, 336, 337 (Topic: *Genomics and Proteomics in Human Infectious Disease Research*), 337 (Topic: *Virulence Mechanisms of Bacterial Pathogens*), 347, 360K, 160L, 361, 361L, 361P, Public Health 341R.
- E. Nutrition: Nutrition 312R, 315 or 331, 321, 338W or 338H, 342, 365 (approved topics only), 355H, Public Health 341R.
- F. Social and behavioral sciences: Only one advertising or communication course may be counted. Advertising 305, 319, 334, Communication Studies 306M, 332, 332K, 342K, 355K, 367, Geography 356T (Topic: *Gender and Health*), Health Education 329K, 335, 352K (approved topics only), 370K (approved topics only), 371K, 373, Marketing 320F, Pharmacy 350K, Public Health 341R, Social Work 310, 311, Sociology 319, 321K (approved topics only), 329, 336D, 354K, 369K, 369L, Women's and Gender Studies 345 (Topic 35: *Psychosocial Issues in Women's Health*).

9. One of the following foreign language/culture choices.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language.
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.

10. Enough additional coursework to make a total of 126 semester hours.

### Option II: Public Health Honors

5. Breadth requirement: An honors mathematics course; Biology 315H and 325H; Chemistry 301H and 302H. Credit by examination may not count toward this requirement.
6. In fulfilling requirement 2a, students must complete an honors statistics course.
7. Chemistry 204, 320M, and 369.
8. A section of Undergraduate Studies 302 or 303 that is approved by the program honors adviser.
9. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.

10. Two semesters of Biology 379H.
11. Nine additional hours of coursework approved by the departmental honors adviser.
12. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
13. Enough additional coursework to make a total of 120 semester hours.

### Option III: Advanced Program

This program provides students with a foundation in the natural sciences applied to public health and advanced specialist training in preparation for a leadership position in public health practice. This program leads to the completion of the Bachelor of Science in Public Health and the Master of Public Health, awarded by the School of Public Health at the University of Texas Health Sciences Center at Houston. During the senior year, students complete the first year of the Master of Public Health at the Austin Regional Campus. The second year of the Master of Public Health is completed at one of the five regional campuses in Austin, Brownsville, Dallas, El Paso, Houston, and San Antonio. Upon completion of the first year of the Master of Public Health, coursework is applied toward option III requirements. Option III students may apply to graduate upon completion of the undergraduate degree requirements and prior to the completion of the Master of Public Health, or may apply to graduate to receive both degrees in the same semester.

5. Mathematics 408C or 408N.
6. Biology 311C, 311D, and 325; or 315H and 325H. These courses must be completed before the student progresses to other upper-division biology and upper-division public health courses.
7. Chemistry 301 or 301H, 302 or 302H, 204, 320M, and 369.
8. Eighteen hours of approved upper-division elective coursework in public health or a supporting area. Graduate coursework completed at the School of Public Health at the University of Texas Health Sciences Center may be applied toward this requirement.
9. One of the following foreign language/culture choices.
  - A. Second-semester-level proficiency, or the equivalent, in a foreign language
  - B. First-semester-level proficiency, or the equivalent, in a foreign language and a three-semester-hour course in the culture of the same language area.
  - C. Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers.
10. Enough additional coursework to make a total of 126 semester hours.

### Special Requirements

Students must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each foundation course, public health core course, and mathematics and science course required by the degree, and a grade point average in these courses of at least 2.00.

More information about grades and the grade point average is given in *General Information* available at <http://registrar.utexas.edu/catalogs/>.

## Bachelor of Science in Textiles and Apparel

The Division of Textiles and Apparel is a place to get a broad-based education, well suited for career opportunities. Students in the Division of Textiles and Apparel enjoy a wide range of academic programs and career opportunities. They study the art of design, the science of chemistry and physics, and the application of retail and management principles, through the lens of history. Majors come in three packages: Retail Merchandising, Apparel Design with Conservation, and Fiber Science. Each program provides hands-on experience with rapidly evolving retail environments, intercultural practices and customs, consumer behavior, apparel and fashion design, computer-aided design, fashion show production and event organization, garment conservation and museum management, and fiber and fabric testing. Capstone retail merchandising and apparel design programs take students to high-profile venues and provide rich opportunities in honors programs. Internships are available to enhance the educational experience and ensure strong career opportunities. Basic research is being conducted in bio-based fibers and specialized fabrics, and 3D technology to address basic human needs. Research is also conducted involving the effects of change and new technologies on the development and distribution of creative textile products. The Division of Textiles and Apparel is a marvelous place to get a broad-based education, well suited for rewarding career opportunities.

### Prescribed Work Common to All Options

1. All students pursuing an undergraduate degree must complete the University's Core Curriculum (p. 22). The core includes courses in language, literature, social sciences, natural sciences, and fine arts.
2. Two courses with a writing flag. One of these courses must be upper-division. Courses that carry a writing flag are identified in the Course Schedule available at <http://registrar.utexas.edu/schedules>. They may be used simultaneously to fulfill other requirements, unless otherwise specified.

### Prescribed Work for Each Option

#### Option I: Apparel Design and Conservation

In addition, students following the apparel design and conservation option must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

3. Three hours of lower-division coursework in anthropology, economics, psychology, or sociology; and six hours of upper-division coursework in American studies, anthropology, cultural studies, psychology, or sociology.
4. Mathematics 408C or 408N; and one of the following: Mathematics 316, Statistics and Scientific Computation 302, 303, 304, 305, 306, or Educational Psychology 371.
5. Chemistry 301 or 301H, 302 or 302H, and 204; and either Biology 311C (for the apparel design specialization) or Chemistry 320M (for the conservation specialization).



6. Accounting 310F, Management 320F, and Marketing 320F.
7. Either (a) for the apparel design specialization, three semester hours of studio art, or (b) for the conservation specialization, Art History 303; and nine semester hours of upper-division coursework in art history or studio art.
8. Textiles and Apparel 205, 105L, 219C and 119L, 325L, 325M, 352D, 260L, and 260M; Human Development and Family Sciences 322; and one of the following sequences:
  - A. Apparel design specialization: Textiles and Apparel 212K, 212L, 316L, 126, 226L, 355C, 164K (Topics 1: *Flat Pattern*, 2: *Draping*, and 3: *Advanced Apparel Design*), 264L (Topics 1: *Flat Pattern*, 2: *Draping*, and 3: *Advanced Apparel Design*), and three semester hours chosen from Textiles and Apparel 303, 327, 328, 355D, 355N, 359H, 365, 376, 378H, and 379H.
  - B. Conservation specialization: Textiles and Apparel 355D; three semester hours chosen from Textiles and Apparel 303, 327, 328, 355N, and 376; twelve semester hours chosen from Textiles and Apparel 126 and 226L, 352C, 355C, 359H, and topics of 164K and 264L, 365, 378H, and 379H; and six or seven semester hours chosen from Textiles and Apparel 212K, 212L, 316L, and 316Q.
9. Thirty-six semester hours of upper-division coursework, of which at least eighteen must be within and at least twelve must be outside the School of Human Ecology. At least twenty-one semester hours of upper-division coursework must be taken in residence at the University.
10. Enough additional coursework to make a total of 126 semester hours.

## Option II: Retail Merchandising

In addition, students following the retail merchandising option must complete the following degree-level requirements. In some cases, courses that fulfill degree-level requirements also meet the requirements of the core.

3. Six semester hours of economics and three semester hours of psychology, sociology, or anthropology.
4. Mathematics 408C or 408N; and one of the following: Mathematics 316, Statistics and Scientific Computation 302, 303, 304, 305, 306, or Educational Psychology 371.
5. Chemistry 301 or 301H, 302 or 302H, and 204; and Biology 311C and 311D.
6. Art History 301.
7. Communication Studies 306M, Accounting 310F, Marketing 320F, and Advertising 318J; and six semester hours chosen from Management 320F, Management Information Systems 302F, and Legal Environment of Business 320F.
8. Forty-seven semester hours in the School of Human Ecology, including the following coursework:
  - A. Textiles and Apparel 205, 105L, 212K, 212L, 315K, 316Q, 219C and 119L, 352M, 355P, 260L, 260M, 361, and 376; and nine hours chosen from Textiles and Apparel 303, 325L, 325M, 327, 328, 355D, 355K, 355N, 164K and 264L, 365, 378H, and 379H.

- B. Human Development and Family Sciences 322; Textiles and Apparel 361; and three additional hours in human development and family sciences or nutrition.

9. Thirty-six semester hours of upper-division coursework, of which at least eighteen must be within and at least twelve must be outside the School of Human Ecology. At least twenty-one semester hours of upper-division coursework must be taken in residence at the University.
10. Enough additional coursework to make a total of 126 semester hours.

## Option III: Textiles and Apparel Honors

3. Breadth Requirement: An approved calculus course and an approved statistics course (one of these must be honors); Chemistry 301H and 302H; Biology 315H and 325H. Credit earned by examination may not be counted toward this requirement.
4. A section of Undergraduate Studies 302 or 303 that is approved by the departmental honors adviser.
5. A section of Rhetoric and Writing 309S that is restricted to Dean's Scholars.
6. Textiles and Apparel 105L, 205, 327, 328, 260L, and 260M.
7. Twenty-two semester hours selected from the three streams of Textiles and Apparel courses with at least three semester hours in each of the streams: Apparel Design, History and Conservation, Retailing and Merchandising, as well as Human Development and Family Sciences 322 with consent of the honors adviser.
8. Six hours of Textiles and Apparel, including Textiles and Apparel 379H. In all cases, students will be required to conduct research and write a thesis. In some cases, this thesis will be accompanied by a portfolio of work.
9. Six additional semester hours from biology, chemistry, computer science, engineering, mathematics or physics. Courses designed for non-science majors may not be counted toward this requirement.
10. Six semester hours of coursework in the College of Liberal Arts or the College of Fine Arts.
11. Thirty-six semester hours of upper-division coursework. At least twenty-one semester hours of upper-division coursework must be taken in residence at the University.
12. Twelve additional semester hours of coursework approved by the departmental honors adviser.
13. Enough additional coursework to make a total of 120 semester hours.

## Special Requirements

Students must fulfill both the University's General Requirements (p. 18) for graduation and the college requirements (p. 483). They must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in *General Information*.

To graduate under option III, students must remain in good standing in the Dean's Scholars Honors Program (p. 481) must earn grades of at least A- in the departmental research and thesis courses described in requirement 8 above, and must present their research in an approved

public forum, such as the college's annual Undergraduate Research Forum.

## Order and Choice of Work

The student should consult the faculty adviser each semester about order and choice of work and balancing the laboratory load. Students should also check prerequisite requirements carefully.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* (<http://registrar.utexas.edu/schedules>) to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Natural Sciences

### Natural Sciences: NSC

#### Lower-Division Courses

##### NSC 301C. Freshman Seminar.

Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.

##### NSC 001D. Practicum in Clinical Laboratory Science.

Restricted to clinical laboratory science majors. Students participate in a twelve- to fifteen-month off-campus training program. Forty laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Completion of all organized coursework for the Bachelor of Science in Clinical Laboratory Science degree and consent of the program director.

##### NSC 302. Texas Interdisciplinary Plan: Critical Thinking Seminar.

Restricted to students in the Texas Interdisciplinary Plan or in the Gateway Program. An examination of fundamental concepts in critical thinking, including the role of intellectual virtues, an analysis of the elements of thought, Socratic thinking, and the application of universal intellectual standards. Three lecture hours a week for one semester, with additional hours to be arranged. Liberal Arts 302 and Natural Sciences 302 may not both be counted. May not be repeated for credit.

##### NSC 306J. Science for the Twenty-First Century I.

Restricted to applied learning and development majors. The first of an integrated sequence of laboratory-based courses. Subjects include

energy and motion, electrical circuits, atomic theory, waves, and sound. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306J and 309 (Topic: Science for the Twenty-First Century I) may not both be counted. May not be counted toward a degree in the College of Natural Sciences.

##### NSC 306K. Science for the Twenty-First Century II.

Restricted to applied learning and development majors. The second of an integrated sequence of laboratory-based courses. Subjects include physical and chemical properties of matter, Earth's building blocks, plate tectonics, landforms, and weathering. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306K and 309 (Topic: Science for the Twenty-First Century II) may not both be counted. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Natural Sciences 306J with a grade of at least C-.

##### NSC 306L. Science for the Twenty-First Century III.

Restricted to applied learning and development majors. The third of an integrated sequence of laboratory-based courses. Subjects include properties of life, compartments of living organisms, inheritance, adaptations, variations, and disease. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306L and 309 (Topic: Science for the Twenty-First Century III) may not both be counted. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Natural Sciences 306J and 306K with a grade of at least C- in each.

##### NSC 306M. Science for the Twenty-First Century IV.

The fourth of an integrated sequence of laboratory-based courses. Subjects include astronomy and the earth's climate. Two lecture hours and four laboratory hours a week for one semester. Natural Sciences 306M and 309 (Topic: Science for the Twenty-First Century IV) may not both be counted. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Natural Sciences 306J and 306K with a grade of at least C- in each.

##### NSC 109, 209, 309. Topics in Natural Sciences.

For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary.

##### NSC 209P. Topics in Calculus for Emerging Scholars.

Restricted to students in the Emerging Scholars Program. A workshop focusing on ideas more than computation and procedures, where students work in small groups on sets of problems designed to encourage advanced thinking about calculus. Three lecture hours a week for one semester. Mathematics 210T (Topic: Topics for Emerging Scholars) and Natural Sciences 209P may not both be counted. Offered on the pass/fail basis only. Prerequisite: Concurrent enrollment in an approved calculus course.

##### NSC 110. Dean's Scholars Seminar.

Restricted to students in the Dean's Scholars Program. Emphasis on student participation. Format may include student speakers, outside speakers, discussions, visits to laboratories, or other projects. The equivalent of one lecture hour a week for one semester. May be repeated for credit. Offered on the pass/fail basis only.

##### NSC 110E. Internship in the Sciences.

Restricted to students in the College of Natural Sciences. Practical work experience related to the student's area of interest in natural sciences. Internships may be on or off campus, paid or unpaid, and may include work with nonprofit agencies, government offices, or

private corporations. Students work in a professional environment and apply analysis, communication, and other academic skills to practical work. Individual instruction conducted on the Web. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Completion of fifteen semester hours of coursework and consent of instructor.

### **NSC 311. Critical Reasoning.**

Restricted to students in the Texas Interdisciplinary Plan program. An examination of the fundamental concepts in critical reasoning, including the analysis of argument, application of intellectual standards, and the role of intellectual virtues. Three lecture hours a week for one semester, with additional hours to be arranged.

### **NSC 115. Women in Natural Sciences Seminar.**

The work and lives of women scientists in a sociocultural context. One lecture hour a week for one semester.

### **NSC 118C, 218C, 318C. Forum Seminar Series.**

Restricted to freshmen and sophomores. Lectures and discussions on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

### **NSC 119, 219, 319, 419, 519, 619. International Learning Seminars.**

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Natural Sciences 119, 219, 319, 419, 519, 619 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Varies with the topic.

## **Upper-Division Courses**

### **NSC 120E. Internship in the Sciences.**

Restricted to students in the College of Natural Sciences. Practical work experience related to the student's area of interest in Natural Sciences. Internships may be on or off campus, paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. Students work in a professional environment and apply analysis, communication, and other academic skills to practical work. Individual instruction conducted on the Web. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Upper-division standing and consent of instructor.

### **NSC 321. Introduction to Peer Mentoring and Leadership.**

Restricted to students in the College of Natural Sciences. Explores current theory and research related to peer mentoring and leadership within higher education. Includes interactive lectures; and the opportunity for students to identify and work through ethical choices as peer leaders; to study leadership concepts such as conflict resolution, diversity, and group dynamics; to work collaboratively; and to conduct independent research. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.

### **NSC 129, 229, 329, 429, 529, 629. International Learning Seminars.**

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Natural Sciences 129, 229, 329, 429, 529, 629 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Varies with the topic.

### **NSC 371. Texas Interdisciplinary Plan Seminar.**

Restricted to students in the Texas Interdisciplinary Plan. An analysis of interdisciplinary themes within the arts and sciences through reading, research, discussion, and writing. Three lecture hours a week for one semester, with additional hours to be arranged. Liberal Arts 371 and Natural Sciences 371 may not both be counted. May not be repeated for credit. Prerequisite: Upper-division standing and consent of the Texas Interdisciplinary Plan adviser.

## **Department of Astronomy**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Astronomy: AST**

### **Lower-Division Courses**

#### **AST 301 (TCCN: ASTR 1303). Introduction to Astronomy.**

General introduction to astronomy for nonscience majors. The solar system, stars, galaxies, and cosmology. Three lecture hours a week for one semester. Only one of the following may be counted: Astronomy 301, 302, 303, 307. May not be counted toward a degree in the College of Natural Sciences.

#### **AST 101L. Astronomy Discovery Laboratory.**

For nonscience majors. Hands-on projects in observational astronomy and related laboratory disciplines. Students work in small groups. Three laboratory hours a week for one semester. May not be counted by students with credit for Astronomy 103L. Prerequisite: Credit or registration for Astronomy 301.

#### **AST 302. Self-Paced Introduction to Astronomy.**

General, self-paced introduction to astronomy for nonscience majors. The solar system, stars, galaxies, and cosmology. Self-paced. Only one of the following may be counted: Astronomy 301, 302, 303, 307. May not be counted toward a degree in the College of Natural Sciences.

#### **AST 303. Introduction to Astronomy with Celestial Observations.**

General introduction to astronomy for nonscience majors. The solar system, stars, galaxies, and cosmology. Introduces students to the night sky and includes some observational activities. Three lecture hours a week for one semester. Only one of the following may be counted: Astronomy 301, 302, 303, 307. May not be counted toward a degree in the College of Natural Sciences.

**AST 103L (TCCN: ASTR 1103). Astronomical Observations.**

For nonscience majors. Observations of the night sky with the naked eye and small telescopes; indoor laboratory activities. Two laboratory hours a week for one semester. May not be counted by students with credit for Astronomy 101L, 302, or 303. Prerequisite: Credit or registration for Astronomy 301 or 307.

**AST 104. Undergraduate Astronomy Seminar.**

Designed for astronomy majors. Discussions about current astronomical research, with different topics emphasized each semester. One lecture hour a week for one semester. May be repeated twice for credit when the topics vary. Offered on the pass/fail basis only.

**AST 307. Introductory Astronomy.**

Introduction to astronomy for science and engineering students. The solar system, stars, galaxies, and cosmology. Three lecture hours a week for one semester. Only one of the following may be counted: Astronomy 301, 302, 303, 307. Prerequisite: Mathematics 305G or the equivalent or consent of instructor; high school trigonometry and physics are recommended.

**AST 309 (TCCN: ASTR 1304). Topics in Astronomy for Nonscience Students.**

Selected topics in modern astronomy: solar system, galaxies, peculiar stars, cosmology, and others. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences. May be repeated for credit when the topics vary. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 309L. Search for Extraterrestrial Life.**

For nonscience majors. Origin of life in the solar system, existence of other planetary systems, possibilities and techniques for detection of and communication with other intelligences. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Astronomy 301, 302, 303, or consent of instructor. Students must register for this course with the coordinator in the department's Student Office.

**AST 309N. Lives and Deaths of Stars.**

For nonscience majors. How stars live and die; extremes of stars and their life cycles. Exotic objects such as white dwarfs, supernovae, neutron stars, pulsars, and black holes. Specific topics may vary with instructor. Three lecture hours a week for one semester. Astronomy 309N and 309Q may not both be counted. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 309P. Astronomy in Science Fiction.**

The use of astronomy and other sciences in science fiction literature. Critical analysis of selected novels as to the validity of the astronomy used. Three lecture hours a week for one semester. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 309Q. Time and the Cosmos.**

For nonscience majors. From the beginning of time in the Big Bang to the end of time in the black hole. Includes the early universe, the formation and evolution of single and double stars, and the supercompact objects they eventually become: white dwarfs, pulsars, and black holes. Three lecture hours a week for one semester. Astronomy 309N and 309Q may not both be counted; Astronomy 309Q

and 309R may both be counted. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 309R. Galaxies, Quasars, and the Universe.**

For nonscience majors. Galaxies, quasars, giant black holes; cosmic evolution; the origin and future of the universe. Three lecture hours a week for one semester. Astronomy 309Q and 309R may not both be counted. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 309S. The Solar System.**

For nonscience majors. The nature, origin, and evolution of our solar system, including planets, moons, and other bodies. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 309T. The Milky Way Galaxy.**

Our spiral system of stars, gas, and dust; star formation. Three lecture hours a week for one semester. Prerequisite: Astronomy 301, 302, 303, or consent of instructor.

**AST 110K, 210K, 310K. Conference Course.**

Supervised study of selected areas of astronomy, by arrangement with a faculty member. Conference course. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

**AST 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Astronomy.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Astronomy. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**Upper-Division Courses**

**AST 321. Current Problems in Astronomy.**

For nonscience majors. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; and Astronomy 301, 302, 303, or consent of instructor.

**AST 324. Origins: The Universe, Stars, Planets, and Life.**

For nonscience majors. Cosmic origins from the Big Bang to life, and the connections among the origins of stars, planets, and life. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Astronomy 301, 302, 303, or consent of instructor.

**AST 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Astronomy.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Astronomy. University credit is awarded for work in an exchange program; it may be counted as coursework



taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **AST 350L. History and Philosophy of Astronomy.**

Historical influence of astronomical concepts on social, economic, literary, and scientific life; the place of astronomy in society. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Astronomy 301, 302, 303, or consent of instructor.

#### **AST 351. Astronomical Instrumentation.**

A hands-on course in computer-controlled optical instrumentation. Intended for natural science and engineering students interested in the practical aspects of instrument design and construction. Includes optics and optical design, electronics, machining and mechanical design, and computer interfacing. Students work in groups and as teams to design a computer-controlled optical instrument. The equivalent of three lecture hours a week for one semester. Prerequisite: Upper-division standing in the College of Natural Sciences or the Cockrell School of Engineering, or consent of instructor.

#### **AST 352K. Stellar Astronomy.**

Properties of stars and starlight: principles of radiation; interpretation of stellar spectra. Observational techniques such as photometry, spectroscopy, and telescopes and detectors; variable stars; binary stars. Three lecture hours a week for one semester. Prerequisite: Physics 316 and 116L.

#### **AST 352L. Positional, Dynamical, and Kinematical Astronomy.**

Coordinate systems and time; stellar positions and motions; the kinematics and dynamics of star clusters and galaxies. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mathematics 427K.

#### **AST 152M. Stellar Astronomy Laboratory.**

An introduction to practical observational techniques in astronomy, designed for astronomy majors or advanced students in a physical science. Exercises on the spectroscopy, photometry, and positions of stars using a sixteen-inch telescope on campus. Three laboratory hours a week for one semester. With consent of instructor, may be repeated for credit. Prerequisite: Physics 316 and 116L; credit or registration for Astronomy 352K is recommended.

#### **AST 353. Astrophysics.**

Survey of the physics of stellar and nonstellar radiation laws, stellar atmospheres and interiors; high-energy astrophysics. Three lecture hours a week for one semester. Prerequisite: Physics 316 and 116L.

#### **AST 358. Galaxies and the Universe.**

Our galaxy and its constituents; stars and interstellar matter. Properties of other galaxies; galaxy interactions and mergers; expansion and evolution of the universe. Three lecture hours a week for one semester. Prerequisite: A major in science or engineering, or consent of instructor; and Physics 316 or the equivalent. Astronomy 307 or 352K is recommended.

#### **AST 364. Solar System Astronomy.**

Modern studies of the solar system, including properties of the planets and smaller bodies, and the origin of planetary systems. Three lecture hours a week for one semester. Prerequisite: Physics 316 and 116L.

#### **AST 367M. Physical Science: Methods of Astronomy.**

Same as Physical Science 367M. An introductory, self-paced course in the methods of astronomy that emphasizes learning astronomical principles through observations. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts, Plan I, degree with a major in astronomy. Prerequisite: Upper-division standing and nine semester hours of coursework in mathematics and/or science, including one of the following: Physical Science 303, 304, Astronomy 301, 302, 303. Equivalent preparation in mathematics, physics, chemistry, or earth sciences may be substituted with written approval of the instructor.

#### **AST 175, 275, 375. Conference Course.**

Conference course. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

#### **AST 376. Special Topics in Advanced Astronomy.**

Designed for science majors. Three lecture hours a week for one semester. Up to six semester hours may be counted toward the major requirement for the Bachelor of Arts with a major in astronomy. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor. Additional prerequisites vary with the topic.

#### **AST 379H. Honors Tutorial Course.**

Research project and thesis for students electing to take the honors program in astronomy. Conference course. May be repeated once for credit. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.

## **School of Biological Sciences**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Biology: BIO**

#### **Lower-Division Courses**

##### **BIO 101C, 301C, 401C, 601C. Topics in Biology.**

Topics in biology that are especially relevant to current issues and problems in modern society. For each semester hour of credit earned, one lecture hour a week for one semester. Some topics require one additional discussion hour or three or four additional laboratory hours a week; these are identified in the Course Schedule. May not be counted toward a degree in biology. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: The Biology of Being Human.** Introductory biology course that covers human evolution, genetics and genomics, behavior, population growth and environmental issues. May not be counted toward a degree in the College of Natural Sciences.

##### **BIO 301D. Biology for Business, Law, and Liberal Arts.**

Designed for nonscience majors. The scientific method and the social uses of scientific information. Topics include diet and chronic disease, radiation biology, DNA fingerprinting, the biology of learning,

conservation of biotic diversity, and the biology of reproduction. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences.

#### **BIO 301E. Problems in Modern Biology.**

An introduction to major concepts in biology, with emphasis on topics, such as genetics, that are relevant to current issues in the field. Three lecture hours and one discussion hour a week for one semester. Biology 301E and 301L may not both be counted; Biology 301E and 301M may not both be counted. May not be counted toward a degree in biology. Prerequisite: Admission to the Plan II Honors Program.

#### **BIO 301L (TCCN: BIOL 1308). Molecules to Organisms.**

Designed for nonscience majors. Introduction to the structure and function of organisms from the molecular to the organ system level; an integrated approach to cell and molecular biology, genetics, development, and physiology of organisms. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301L, 211, 311C; only one of the following may be counted: Biology 301L, 311D, 214. Biology 301E and 301L may not both be counted. May not be counted toward a degree in the College of Natural Sciences.

#### **BIO 301M (TCCN: BIOL 1309). Ecology, Evolution, and Society.**

Designed for nonscience majors. Introduction to environmental adaptations, diversity of organisms, species interactions, organization and processes of communities, population growth and limitations, evolution and population genetics, origin of life, and human impact on the environment. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301M, 311D, 213. Biology 301E and 301M may not both be counted. May not be counted toward a degree in the College of Natural Sciences, except for the Bachelor of Science in Human Development and Family Sciences.

#### **BIO 102C, 202C, 302C, 402C. Conference Course.**

Supervised study of selected topics in biology, by individual arrangement with the School of Biological Sciences and instructor. Conference course. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### **BIO 305E. Plants, Environment, and Human Affairs.**

Designed for nonscience majors. Plants and the environment, including basic ecological principles and major issues such as global warming and the biodiversity crisis; plants and society, including foods, beverages, medicines, drugs, and other plant products. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences.

#### **BIO 305F. How Plants Sense and Respond to Stimuli.**

Designed for nonscience majors. Exploration of the ways plants sense information about their environment and adapt their growth accordingly; similarities between plant and animal sensory physiology. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences.

#### **BIO 406D. Native Plants.**

Designed for nonscience majors. Introduction to the flora of central Texas. Involves plant identification, distribution, and consideration of edible and useful wild plants. Two lecture hours and six laboratory

hours a week for one semester, including field trips. May not be counted toward a degree in the College of Natural Sciences.

#### **BIO 206L (TCCN: BIOL 1106, BIOL 1107). Introductory Laboratory Experiments in Biology.**

The organizing principles of biology (such as molecular and cellular functions, reproduction, development, homeostatic mechanisms, and organismal physiology and behavior) are used within a comparative and evolutionary framework to train students in modern laboratory techniques, bioinformatics, experimental design, and interpretation of results. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Credit or registration for Biology 311C or 311D (or credit for Biology 211 or 214).

#### **BIO 307D. Biology of AIDS.**

Designed for nonscience majors. Introduction to organs, cells, genes, viruses, infectious diseases, and the immune system. Basic biology of HIV, AIDS, and epidemiology. Three lecture hours and one discussion hour a week for one semester. May not be counted toward a degree in the College of Natural Sciences.

#### **BIO 208L. Field Biology.**

Field projects, laboratory exercises, field trips, and computer simulation exercises to acquaint students with the principles and applications of ecology and some of the experimental and descriptive methods of ecological investigations. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Credit or registration for Biology 311D (or credit for 213).

#### **BIO 309D. The Human Body.**

Designed for nonscience majors. Introduction to the anatomical systems of the human body, their physiological functions and interrelationships. Three lecture hours and one discussion hour a week for one semester. Biology 309D and 365R may not both be counted. May not be counted by students with credit for Biology 365S. May not be counted toward a degree in the College of Natural Sciences, except for the Bachelor of Science in Human Development and Family Sciences.

#### **BIO 309F. Heredity, Evolution, and Society.**

Designed for nonscience majors. An elementary course in human genetics and its social impact. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 309F, 346. May not be counted toward a degree in the College of Natural Sciences, except for the Bachelor of Science in Human Development and Family Sciences.

#### **BIO 311C (TCCN: BIOL 1306). Introductory Biology I.**

Introduction to biological energy transformation, cell structure and physiology, and gene expression. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301L, 211, 311C. Biology 311C and 212 may not both be counted. Prerequisite: Credit or registration for Chemistry 301 or 301H.

#### **BIO 311D (TCCN: BIOL 1307). Introductory Biology II.**

Introduction to mechanisms of inheritance, evolution, physiology, and species interactions. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 301L, 311D, 214. Only one of the following may be counted: Biology 301M, 311D, 213. Prerequisite: Biology 311C with a grade of at least C- (or 211 and 212 with a grade of at least C- in each).

### **BIO 315H. Advanced Introduction to Genetics: Honors.**

Basic principles of genetics and cell biology. Emphasis on gene structure and regulation; transmission of heritable traits; structure and function of cells; bacterial and viral genetics; and recombinant DNA technology. Three lecture hours and one discussion hour a week for one semester. Prerequisite: A score of 5 on the College Board Advanced Placement Examination in Biology and credit or registration for Chemistry 301 or 301H.

### **BIO 317. Introduction to Public Health.**

Same as Public Health 317. Overview and basic principles of public health, including the public health system, concepts and tools for measuring health in populations, the relationship between public health and the medical care system, and the role of law and government in public health. Three lecture hours a week for one semester.

### **BIO 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Biology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Biological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **BIO 320. Cell Biology.**

Principles of eukaryotic cell structure and function; macromolecules, energetics, membranes, organelles, cytoskeleton, gene expression, signaling, division, differentiation, motility, and experimental methodologies. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 320L. Cell Biology Laboratory.**

Explores the complex structures and functions of cells through direct observation and experimentation. Subjects may include regulation of gene transcription and translation, protein sorting, organelles and membrane trafficking, cytoskeletal dynamics, and cell division. Students use a combination of modern molecular biology, biochemistry, and microscopy techniques, with a strong emphasis placed on hypothesis-driven approaches, proper experimental design, and clear scientific writing and presentation. One lecture hour and five laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 320.

### **BIO 321G. Introduction to Computational Biology.**

Introduces computational methods used in molecular, cellular, organismal, and population biology. Subjects include molecular bioinformatics, modeling and simulation, and network analysis. Three lecture hours and two computer lab hours a week for one semester. Prerequisite: Biology 325 or 325H; Computer Science 303E, 305J, 307, or Statistics and Scientific Computation 222; and Mathematics 408C, or 408K and 408L, or 408N and 408S, with a grade of at least C- in each.

### **BIO 321L. Aquatic Entomology.**

The taxonomy of aquatic insects; the use of aquatic insects in biomonitoring. Two lecture hours and three laboratory hours a week

for one semester. Only one of the following may be counted: Biology 321L, 370C (Topic: Applied Aquatic Entomology), 384K (Topic 13: Aquatic Entomology). Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 322. Structure, Physiology, and Reproduction of Seed Plants.**

The principles of structure and functioning of higher plants; special attention to the dynamics of growth and development and reproduction. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, Chemistry 302 or 302H, and concurrent enrollment in Biology 122L.

### **BIO 122L. Structure, Physiology, and Reproduction of Seed Plants Laboratory.**

Observation of structure and reproduction in seed plants and employment of experimental techniques that demonstrate physiological processes, especially processes of growth and development. Two laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Biology 322.

### **BIO 323L. Laboratory Studies in Cell Biology.**

Research exercises involving light/electron microscopy, image processing, autoradiography, chromatography, fractionation, flow cytometry, spectroscopy, diffraction, antibody labeling, cell growth, and kinetics. One lecture hour and four laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit or registration for Biology 320.

### **BIO 324. Survey of the Plant Kingdom.**

Review of the groups of living and fossil plants, emphasizing their organization, reproduction, and evolution. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 124L.

### **BIO 124L. Survey of the Plant Kingdom Laboratory.**

Demonstration of members of various plant groups, using cultures and prepared materials, to emphasize organization, reproduction, and evolution. Two laboratory hours a week for one semester. Prerequisite: Concurrent enrollment in Biology 324.

### **BIO 325. Genetics.**

Basic principles of Mendelism, molecular genetics, structure and function of genes and chromosomes, populations and evolution. Three lecture hours and one discussion hour a week for one semester. Biology 325 and 325H may not both be counted. Prerequisite: Biology 311C (or 211) and 311D (or 214), with a grade of at least C- in each.

### **BIO 325H. Genetics: Honors.**

Basic principles of genetics and evolution. Emphasis on population genetics and natural selection; structure and function of organ systems; behavioral ecology; and mutational analysis of organismal development. Three lecture hours and one discussion hour a week for one semester. Biology 325 and 325H may not both be counted. Prerequisite: Biology 315H with a grade of at least C-.

### **BIO 325L. Laboratory Experience in Genetics.**

Experimentation and direct observation in fundamental aspects of transmission genetics. One lecture hour, four laboratory hours, and two hours of computing work a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 325T. Human Genetics.**

Genomics, cancer genetics, identification and analysis of human disease genes, and monogenic and multifactorial traits in humans. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 226L. General Microbiology Laboratory.**

Introduction to microbiology laboratory techniques and experimental demonstration of principles of microbiology. One lecture and three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 326M or 326R (or 226R).

### **BIO 326M. Introductory Medical Microbiology and Immunology.**

Designed primarily for nursing and prepharmacy students. Overview of the structure, function, and genetics of bacteria, viruses, and fungi, with emphasis on the interactions between micro-organisms and the human host. Includes principles of microbial pathogenesis, the host's innate and adaptive immune responses to infection, epidemiology, laboratory diagnosis, and antimicrobial chemotherapy and vaccines. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 311C; Biology 325 or 325H with a grade of at least C-; Chemistry 301 with a grade of at least C-; and one of the following with a grade of at least C-: Mathematics 408C, 408K, 408N, 408R, Statistics and Scientific Computation 302.

### **BIO 326R. General Microbiology.**

Overview of the major areas of microbiological study, including cell structure and function, genetics, host-microbe interactions, physiology, ecology, diversity, and virology. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H with a grade of at least C-.

### **BIO 327. General Phycology.**

A general survey of the algae and of their biology. Three lecture hours a week for one semester. Biology 327 and 388J may not both be counted. Prerequisite: Biology 324, 124L, and 325 or 325H, with a grade of at least C- in each, and concurrent enrollment in Biology 127L.

### **BIO 327D. Emerging Infectious Diseases.**

Genomic and proteomic tools used to understand the causes of human infectious diseases. Covers genome sequencing, community sequencing, proteomics, microarrays, and human polymorphism analysis; and how these technologies have been applied to the study of important human viral diseases. Also includes extensive coverage of the molecular and clinical biology of these diseases. Three lecture hours a week for one semester. Biology 327D and 337 (Topic: Emerging Infectious Diseases) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 327E. Epigenetics.**

A study of epigenetic modifications, the covalent modifications of DNA or histones that cause changes in gene expression. Particular attention is given to how experience or environmental factors epigenetically modify health or behavior in animals. Three lecture hours a week for one semester. Biology 327E and 337 (Topic: Epigenetics) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 327G. Genomics.**

Genome structure, organization, and function of model organisms; theory and methodology of genetic and physical mapping; sequencing analysis and annotation; genome duplication and evolution; and ethics for biotechnology and cloning. Three lecture hours a week for one semester. Biology 327G and 337 (Topic: Genomics) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 127L. Laboratory in General Phycology.**

Survey of various algal groups, including direct observations of their biology, exposure to research techniques, and instruction in culture procedures. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 327.

### **BIO 328. Introductory Plant Physiology.**

General principles of the mineral nutrition, water relations, metabolic activities, growth and development of green plants. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H.

### **BIO 328D. Discovery Laboratory in Plant Biology.**

Learning methods of experimental design, data gathering, data interpretation, and data presentation, including original experiments relating to questions of current interest in plant physiology. Five lab hours a week for one semester. Biology 328D and 337 (Topic: Discovery Laboratory in Plant Biology) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 128L. Laboratory Experiments in Plant Physiology.**

Introduction to experimental techniques used in the study of the mineral nutrition, water relations, metabolic activities, growth and development of green plants. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 328.

### **BIO 328M. Biostatistics.**

Introduction to methods of statistical analysis of biological data. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 318M, 328M, Statistics and Scientific Computation 318M, 328M. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-, and four semester hours of coursework in biology.

### **BIO 329. Medical Mycology.**

A basic introduction to medical mycology and an overview of research involving both the fungal zoopathogen and its host. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

### **BIO 129L. Medical Mycology Laboratory.**

Basic techniques for the identification and manipulation of fungi of medical importance. Three laboratory hours a week for one semester. Prerequisite: Biology 126L with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 329.

### **BIO 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Biology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the student



abroad adviser in the School of Biological Sciences. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **BIO 329W. Cooperative Biological Sciences.**

This course covers the work period of biological sciences students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application through the College of Natural Sciences Career Services Office; and Biology 325 or 325H, and six additional semester hours of upper-division coursework in biology, with a grade of at least B- in each.

### **BIO 330. Animal Virology.**

Mechanisms by which viruses replicate and kill or transform cells. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

### **BIO 230L. Virology Laboratory.**

Basic experimental techniques applied to selected bacteriophages and animal viruses. Four laboratory hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H, and 126L with a grade of at least C- in each, and credit with a grade of at least C- or registration for Biology 330 or 333.

### **BIO 331L. Laboratory Studies in Molecular Biology.**

The methods and principles of molecular biology in a research laboratory context. Students conduct a research project directed by a faculty member. One lecture hour and four and one-half laboratory hours a week for one semester. Prerequisite: Biology 205L, 206L, 208L, or 126L; and Biology 325 or 325H with a grade of at least C-.

### **BIO 332. Yeast Cell Biology.**

Yeast is used as a model to teach some of the more actively researched areas of cell biology, such as chromosome structure, mating type, cell-cell interaction, DNA replication, mitosis, cytoskeletal motors, cell polarity, signal transduction, cell cycle, checkpoints, secretion, protein modification, yeast genetics, and yeast technology. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.

### **BIO 333. Molecular Genetics of Bacteriophages and Plasmids.**

Mechanisms of the phage infection cycle and of plasmid replication and gene expression; transposons and transposition. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

### **BIO 334. Global Health.**

Same as Public Health 334. Global health issues, including the principles of global health, the burden of morbidity and mortality, health

determinants, health care and public health systems, socioeconomic development, and human rights. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

### **BIO 335. Introduction to Biochemical Engineering.**

Microorganisms in chemical and biochemical synthesis; genetic manipulation of cells by classical and recombinant DNA techniques. Enzyme technology; design of bioreactors and microbial fermentations; separations of biological products. Three lecture hours a week for one semester. Only one of the following may be counted: Biology 335, Biomedical Engineering 339, Chemical Engineering 339, 379 (Topic: Introduction to Biochemical Engineering). Prerequisite: Biology 311C with a grade of at least C-, and either Chemistry 339K and 339L, or 369.

### **BIO 336. Tumor Biology.**

Natural history and causal mechanisms of cancer; viral and chemical carcinogens. Three lecture hours a week for one semester. Biology 336 and 391M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 330 or 360K with a grade of at least C-.

### **BIO 137, 237, 337, 437. Selected Topics in Biology.**

Recent developments and research methods in the biological sciences. For each semester hour of credit earned, one lecture hour a week for one semester. Some topics may require additional hours; these are identified in the Course Schedule. Some topics are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Biology 325 or 325H with a grade of at least C-. Additional prerequisites vary with the topic and are given in the Course Schedule.

**Topic 1: Senior Seminar in Human Biology.** Restricted to human biology majors in their final semester. This topic is offered as 137 only. Offered on the pass/fail basis only. Additional prerequisite: Biology 346 with a grade of at least C-.

**Topic 2: Research Methods: UTeach.** Restricted to students in the UTeach-Natural Sciences program. Students perform independent inquiries and use skills from mathematics and science to solve research problems.

**Topic 3: Natural History of Protists.** A study of protista, a wide variety of eukaryotic organisms which are either unicellular or phylogenetically closely allied to unicellular organisms. Description of the basic taxonomic and ecological groups, and description of the natural history of the major groups of organisms.

**Topic 4: Computational Neuroscience and Neural Networks.**

### **BIO 337J. Computational Biology Laboratory.**

Overview of computational biology, with emphasis on nucleic acid sequence analysis and databases. Class projects and self-learning exercises. Two lecture hours and three computer laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 338. Environmental Health.**

Same as Public Health 338. Introduction to the major areas of environmental health, including hazards in the environment, the effects of environmental contaminants, and various approaches to addressing major environmental health problems. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

### **BIO 438L. Animal Communication.**

Animal communication from a multidisciplinary perspective, with emphasis on quantitative analysis, sensory processing, and evolution of signals. Three lecture hours and three laboratory hours a week for one semester, with computer laboratory hours as required.

Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 359K or 370 with a grade of at least C-.

### **BIO 339. Metabolism and Biochemistry of Microorganisms.**

A study of the metabolic processes of microorganisms, using a biochemical approach. Three lecture hours a week for one semester. Biology 339 and 391R may not both be counted. Prerequisite: Biology 326R (or 226R) with a grade of at least C-, and Chemistry 310M and 310N.

### **BIO 339M. Bacterial Behavior and Signaling Mechanisms.**

Advanced studies in how bacteria perceive their environment and communicate with each other. Subjects may include chemotaxis and motility, morphogenesis and development, and secretion and virulence. Taught entirely through reading and discussion of original articles. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

### **BIO 340L. Biology of Birds.**

Anatomy, physiology, classification, and ecology of birds. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 341R. Public Health Research.**

Same as Public Health 341R. Students conduct public health research, mentored by professionals at public health practice agencies or faculty at graduate schools of public health throughout Texas. An average of twelve hours of fieldwork a week for a total of at least 180 hours. May be repeated for credit. Prerequisite: Biology 325 or 325H with a grade of at least C-; students must also submit a proposal to the instructor.

### **BIO 342L. Field Ornithology.**

Field course with emphasis on field study techniques, species identification by sight and sound, mist netting and banding, censusing techniques, and territory mapping. Two lecture hours and six hours of weekend fieldwork a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 340L.

### **BIO 343M. Transmembrane Signaling Mechanisms.**

Mechanisms by which hormones, light, and other stimuli trigger changes in plant and animal cell metabolism. Three lecture hours a week for one semester. Biology 343M and 388C may not both be counted. Prerequisite: Biology 325 or 325H, and Chemistry 339K with a grade of at least C- in each.

### **BIO 344. Molecular Biology.**

Molecular basis of cellular processes: gene structure and function, DNA replication, RNA and protein synthesis, viruses, molecular aspects of immunology and cancer, and recombinant DNA. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 345. Cell Physiology.**

An integrated approach to basic processes in physiology: metabolism, transport, energetics, molecular and cellular control mechanisms.

Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 310M.

### **BIO 345E. Endocrinology.**

Vertebrate endocrinology (primarily mammalian), with a focus on human pathophysiology. Three lecture hours and one discussion hour a week for one semester. Biology 337 (Topic: Endocrinology) and 345E may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 346. Human Biology.**

Introduction to human evolution, genetics, sexuality, senescence, and population growth. Three lecture hours and one discussion hour a week for one semester. Biology 309F and 346 may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 446L. Human Microscopic and Gross Anatomy.**

Designed for students preparing for biomedical research and the health professions. Focuses on microscopic and gross anatomy of human tissues and organs, with an emphasis on structure function relationships. Subjects include the effects of disease and aging in addition to normal human anatomy. Three lecture hours and four laboratory hours a week for one semester. Biology 416K and 446L may not both be counted. Prerequisite: Biology 311C; Biology 325 or 325H with a grade of at least C-; Chemistry 301 with a grade of at least C-; and one of the following courses with a grade of at least C-: Mathematics 408C, 408K, 408N, 408R, Statistics and Scientific Computation 302.

### **BIO 347. Biology and Genetics of Immune Disorders.**

Immune disorders in mammals, including humans, used as models for examining basic immunological and immunogenetic principles; emphasis on immune disorders of vertebrates. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 148, 248, 348. Training Cruise(s): Research in Biological Oceanography.**

Biology 148 and 348 are same as Marine Sciences 148 and 348 (Topic 1: Research in Biological Oceanography). One or more cruises of one to several days each to collect physical, chemical, oceanographic, and biological data relevant to biological processes in the sea. Preparatory instruction and postcruise sample processing and analysis. May be repeated for credit when the topics vary. Prerequisite: Biology 325 and Chemistry 302 with a grade of at least C- in each, and consent of instructor.

### **BIO 448L. Invertebrate Biology.**

A study of the diversity and evolution of multicellular invertebrate animals, with emphasis on common themes in animal body construction and function. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 349. Developmental Biology.**

Principles of animal development, with emphasis on developmental mechanisms. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 349L. Experiments in Animal Developmental Biology.**

Methods and principles of developmental biology in a laboratory context, with emphasis on animal embryology using molecular

techniques and microscopy. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 349.

### **BIO 350M. Plant Molecular Biology.**

Fundamentals of plant molecular biology, including structure and expression of the chloroplast and mitochondrial genomes. Three lecture hours a week for one semester. Biology 350M and 388M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 351. Economic Botany.**

An in-depth analysis of the origin of domesticated plant species, the role in nature of plant products, and the ways natural products have been altered through artificial selection. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 352. Reproductive Biology of Flowering Plants.**

Pollination biology, breeding systems, reproductive strategies, and fruit and seed dispersal from evolutionary and ecological vantage points. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 353F. Field Entomology.**

A field course on insects, with emphasis on field study techniques, visual identification of species, collecting techniques, and curation in the field. Meets five days a week for one hour a day during a summer-session term; additional fieldwork to be arranged, including extended field trips. Biology 353F and Biology 337 (Topic: Field Entomology) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 453L. Entomology.**

Characteristics, importance, and biology of the major groups of insects. Two lecture hours and three laboratory hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 354. Epidemiology.**

Same as Public Health 354. Introduction to basic principles and concepts in epidemiology, including descriptive epidemiology, association and causation, basic epidemiological study design, evidence-based decision analysis, and applications of epidemiology methods to basic and clinical science. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

### **BIO 354L. Ichthyology.**

Overview of the evolution, biology, and ecology of fishes, emphasizing freshwater fishes. Three lecture hours and three hours of laboratory or fieldwork a week for one semester, with field trips to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 455L. Vertebrate Natural History.**

Phylogeny, taxonomy, life histories, habits, and distribution. Two lecture hours and three hours of laboratory or fieldwork a week for one semester, with field trips to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 456L. Limnology and Oceanography.**

Same as Marine Sciences 440. An introduction to the study of the interactions between aquatic organisms and their environments. Two lecture hours and six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H.

### **BIO 357. Evolutionary Ecology.**

Principles of modern ecology, particularly as they relate to natural selection and evolutionary theory. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 458L. Systematics.**

Comparative study of biological variation of living and fossil organisms, including speciation, biogeography, taxonomy, and phylogeny of genes, populations, species, and higher taxa. Three lecture hours and four laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 359. Global Environmental Change.**

Global change as it affects terrestrial ecosystems, including feedback between ecosystems and the atmosphere. Greenhouse gases and global warming, ozone, biological invasions, and land-use change. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 322 or 324 with a grade of at least C-.

### **BIO 359J. Behavioral Ecology.**

Advanced topics in behavioral ecology, with detailed consideration of animal communication, altruism, sexual selection, plant-animal interactions. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 359K or 370 with a grade of at least C-.

### **BIO 359K. Principles of Animal Behavior.**

An introduction to the study of animal behavior: descriptive analysis of behavior; physiological basis of behavior; development of behavior; adaptive significance and evolution of behavior; communication and social behavior. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 359R. Animal Sexuality.**

The biology of sexuality, including genetics, morphology, physiology, and psychology of sex. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 360K. Immunology.**

The basic concepts of humoral and cell-associated immune phenomena. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

### **BIO 160L. Immunology Laboratory.**

Current techniques in experimental cellular and humoral immunology. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 360K.



**BIO 360M. Molecular Immunology.**

An advanced immunology course with an emphasis on molecular models and medical relevance. Three lecture hours a week for one semester. Biology 337 (Topic: Molecular Immunology) and 360M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 360K with a grade of at least B-.

**BIO 361. Human Infectious Diseases.**

Etiology, pathogenesis, diagnosis, and immunobiology of the major microbial diseases, with emphasis on their prevention. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

**BIO 361L. Public Health Bacteriology Laboratory.**

Training in techniques required for independent work in diagnostic and epidemiological bacteriology. Two lecture hours and five laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 126L and 326R (or 226R) with a grade of at least C- in each.

**BIO 361P. Public Health Internship.**

Students conduct goal-oriented research projects at the Texas Department of State Health Services and other sites. An average of twelve hours of fieldwork a week for a total of 180 hours of fieldwork for one semester. May be repeated for credit. Prerequisite: Biology 126L with a grade of at least B-, and Biology 326M or 326R with a grade of at least B-; students must also complete an application available at the Natural Sciences Career Services office.

**BIO 361T. Comparative Animal Physiology.**

Physiology of organ systems in animal phyla, with special emphasis on physiological adaptations of organisms to their environment. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

**BIO 262. Plant Systematics.**

Elementary principles of plant taxonomy as exemplified by families of flowering plants found seasonally around Austin. Two lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 262L.

**BIO 262L. Angiosperm Diversity Laboratory.**

Practical experience in recognizing, identifying, and classifying families of flowering plants. Four laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 262.

**BIO 363. Plant Speciation.**

Nature of species in higher plants, speciation phenomena in plants, natural hybridization, polyploidy, agamospermy, evolutionary mechanisms. Lectures, readings, discussions, demonstrations. Three lecture hours a week for one semester. Biology 363 and 387E may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

**BIO 364. Microbial Ecology.**

The ability of microbes to adapt to and change their environment. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

**BIO 364E. Current Topics in Advanced Microbial Ecology.**

Development and structure of microbial communities, microbial phylogeny, endosymbiont and symbiont relationships, biogeochemistry, elemental cycling by microbes, and the microbial ecology of disease. Emphasis on active research areas in these topics. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H, and 364 with a grade of at least C- in each.

**BIO 365D. Principles of Drug Action.**

Introduction to the basic principles of pharmacology, including how drugs get into the body, exert their actions, and are metabolized and excreted. Three lecture hours a week for one semester. Biology 337 (Topic: Principles of Drug Action) and 365D may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

**BIO 365L. Neurobiology Laboratory.**

An introduction to physiological, morphological, and molecular techniques used for analysis of the nervous system. Experiments and computer simulations illustrate basics of information processing by the nervous system. Student exercises are supplemented with demonstrations in faculty laboratories. Four laboratory hours and one discussion hour a week for one semester. Prerequisite: Biology 205L, 206L, or 126L with a grade of at least C-; Biology 325 or 325H with a grade of at least C-; and Biology 365R or 371M with a grade of at least C-.

**BIO 465M. Experimental Methods in Physiology.**

A lecture-laboratory course that emphasizes an experimental approach to physiological problems. One lecture hour and seven laboratory hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 345, 361T, 365R, or 371M with a grade of at least C-.

**BIO 365N. Development and Plasticity of the Nervous System.**

An introduction to the principles by which the neural tube (brain and spinal cord) develops during embryogenesis, including regionalization of the brain into forebrain, midbrain, hindbrain, and spinal cord. Particular emphasis will be given to the mechanisms that govern how neurons acquire their identity and form neuronal circuits and synapses. Developmental and congenital diseases and possible therapies, including stem cell based therapy or gene therapy. Three lecture hours a week for one semester. Prerequisite: Biology 349 with a grade of at least C-, and Biology 365R or 371M with a grade of at least C-.

**BIO 365P. Laboratory in Integrative Physiology.**

Study of human physiology using an inquiry-based approach. Students read primary scientific literature; collect, analyze, and present data; write detailed explanations of laboratory activities; and work in groups to design, execute, and present an experiment. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit with a grade of at least C- or registration for Biology 361T or 365S.

**BIO 365R. Vertebrate Neurobiology.**

Introduction to the nervous system and other excitable tissues. Subjects may include membrane potentials, ion channels, synaptic transmission, learning and memory, skeletal and cardiac muscle, and how systems of neurons lead to sensation and motor output. Human diseases are used to illustrate perturbation of normal function. Three lecture hours and one discussion hour a week for one semester. Biology 309D and 365R may not both be counted; Biology 365R and 371M may not both be counted. Biology 365R may not be counted



by students with credit for Biology 416K with a grade of at least C-. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 365S. Systems Physiology.**

Overview of body fluids, the cardiovascular system, respiration, digestion, metabolism, and endocrinology. Three lecture hours and one discussion hour a week for one semester. Credit for Biology 365S may not be earned after a student has received credit for Biology 416L. Prerequisite: Biology 311C; Biology 325 or 325H with a grade of at least C-; Chemistry 301 with a grade of at least C-; and one of the following with a grade of at least C-: Mathematics 408C, 408K, 408N, 408R, Statistics and Scientific Computation 302.

### **BIO 365T. Neurobiology of Disease.**

The neurobiological basis of disorders of the brain, with the main focus on mental illness. Emphasizes the neural circuitries and neurochemical events that underlie specific mental processes and behaviors. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 365R or 371M with a grade of at least C-.

### **BIO 165U. Systems Physiology Laboratory.**

Using an inquiry-based approach, provides students with an opportunity for hands-on experience in human physiology. Students read primary scientific literature; collect, analyze, and present data; and write detailed reports on laboratory activities. Four laboratory hours a week for one semester. May not be counted by students with credit for Biology 416L. Prerequisite: Biology 325 or 325H with a grade of at least C-, and credit or registration for Biology 365S.

### **BIO 365W. Neurobiology of Addiction.**

Study of the neurobiology of neurotransmitters, and the influence of alcohol and drugs of abuse on neurotransmitters. Three lecture hours a week for one semester. Prerequisite: Biology 365R or 371M with a grade of at least C-.

### **BIO 366. Microbial Genetics.**

Molecular biology of nucleic acids; biosynthesis of macromolecules, transfer of genetic material from cell to cell, recombination, mutagenesis, and regulatory mechanisms. Three lecture hours a week for one semester. Biology 366 and 391S may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 326R (or 226R) with a grade of at least C-.

### **BIO 366C. Ion Channels and the Molecular Physiology of Neuronal Signaling.**

Explores the role of molecular conformational changes in higher-level neuronal function and sensory transduction, including the generation and regulation of diverse types of neuronal signaling characteristics. Emphasizes a quantitative approach and the use of models to study function. Three lecture hours a week for one semester. Biology 337 (Topic: Ion Channels and the Molecular Physiology of Neuronal Signaling) and 366C may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 366D. Synaptic Physiology and Plasticity.**

Detailed study of the physiology of synaptic transmission in the mammalian central nervous system. Covers dendritic integration and various forms and mechanisms of synaptic plasticity. Three lecture hours a week for one semester. Biology 337 (Topic: Synaptic Physiology and Plasticity in the Central Nervous System) and Biology 366D may not both be counted. Prerequisite: The following courses,

with a grade of at least C- in each: Biology 366C; Mathematics 408D, 408L, or 408S; and Physics 303L, 316, or 317L.

### **BIO 366E. Visual Neuroscience.**

Physiology of the eye, the retina, and the visual pathways; prospects for nutritional prevention of blinding eye diseases; functional and ecological adaptations of primate vision. Three lecture hours and one laboratory hour a week for one semester. Biology 337 (Topic: Visual Neuroscience) and Biology 366E may not both be counted. Prerequisite: Biology 365R with a grade of at least C-.

### **BIO 366F. Infrastructure of Synaptic Connections in the Brain.**

Synaptic basis of learning and memory, normal development of synaptic circuits and impact of mental retardation, sleep, stress, recovery from brain trauma, Alzheimer's disease, and related topics. Three lecture hours a week for one semester. Biology 337 (Topic: Neurobiology of Synaptic Circuits) and 366F may not both be counted. Prerequisite: Biology 365R with a grade of at least C-.

### **BIO 366L. Neuroimaging Laboratory.**

Basic principles of image formation and techniques of fluorescent imaging and confocal laser-scanning microscopy. Includes image processing and analysis to extract quantitative information from digital images. Survey of imaging techniques, including electron microscopy and functional MRI. One lecture hour and four laboratory hours a week for one semester. Biology 337 (Topic: Microscopy and Fluorescence Imaging Laboratory) and 366L may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least a C-.

### **BIO 366M. Mathematical and Computational Neuroscience I.**

Same as Neuroscience 366M. First course in a two-semester sequence on mathematical and computational neuroscience. Exploration of linear systems, including linear algebra, differential equations, Fourier analysis, convolution, and related areas, with an emphasis on applications to neuroscience. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-; and credit or registration for Neuroscience 335 and Mathematics 408D or 408M.

### **BIO 366N. Mathematical and Computational Neuroscience II.**

Same as Neuroscience 366N. Continuation of Biology 366M or Neuroscience 366M. Topics include various mathematical and computational areas that are common in neuroscience research, with emphasis on nonlinear systems, probability, random processes, information theory, and their applications in neuroscience. Three lecture hours a week for one semester. Prerequisite: Biology 366M or Neuroscience 366M.

### **BIO 366P. Laboratory in Psychophysics.**

Studies the principles of experimental design, execution, and interpretation by having students measure their own perceptual and behavioral responses to visual and auditory tests. Includes data analysis, statistical significance, and interpretation. Five laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 366R. Molecular Genetics.**

Techniques used for studying molecular biology and transgenic organisms. Includes advanced genetics and the molecular genetics used in clinical applications. Three lecture hours a week for one

semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 366S. Laboratory in Neuromolecular and Developmental Biology.**

Practice with modern techniques used to study the molecular basis for nervous system development, function, and disease in vertebrate and invertebrate model systems. Subjects may include the cellular localization of neural proteins and how mutation of neural genes affects behaviors. Six laboratory hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 367F. Foundations of Human Neuroimaging.**

Survey of neuroimaging methods and results with particular emphasis on vision science. Describes the physical and physiological mechanisms of image formation. Three lecture hours a week for one semester. Biology 337 (Topic: Foundations of Human Neuroimaging) and 367F may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 367V. Evolutionary Neurobiology.**

Examination of the nervous system in an evolutionary context. Three lecture hours a week for one semester. Biology 337 (Topic: Evolutionary Neurobiology) and 367V may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 368L. Techniques in Molecular Genetics.**

Laboratory experience in mutagenesis, transformation, transduction, isolation of plasmid and bacteriophage DNA, in vitro recombinant DNA procedures, and DNA base sequencing. One lecture hour and seven laboratory hours a week for one semester. Biology 368L and 390P may not both be counted. Prerequisite: Biology 325 or 325H, and 126L with a grade of at least C- in each.

### **BIO 369L. Herpetology.**

Biology of amphibians and reptiles, including evolution, ecology, behavior, physiology, life history, and field identification. Three lecture hours and three laboratory hours a week for one semester, with weekend field trips to be arranged. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 455L, 357, 359K, or 478L with a grade of at least C-.

### **BIO 370. Evolution.**

Introduction to modern evolutionary biology, focusing on the evolution of molecular, developmental, morphological, and behavioral traits. Genetic and ecological bases of evolutionary changes within populations and of evolutionary divergence in animals and plants. Three lecture hours and one discussion hour a week for one semester. Biology 370 and 385K (Topic 2: Evolution) may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 170C, 270C, 370C, 470C. Conference Course.**

Supervised study of selected topics in biology, by individual arrangement with the instructor. Conference course. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Biology 325 or 325H with a grade of at least C-. Additional prerequisites vary with the topic and are given in the Course Schedule.

### **BIO 471G. Natural History Museum Science.**

An introduction to curatorial practices in natural history museums. Three lecture hours and one discussion hour a week for one semester;

students also complete a twenty- to thirty-hour curatorial project. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 371L. Experimental Physiology.**

Experimental approach to physiological mechanisms by which animals adapt to their environment. One lecture hour, four laboratory hours, and two hours of computer work a week for one semester. Prerequisite: Biology 205L, 206L, 208L, or 126L with a grade of at least C-; and Biology 325 or 325H with a grade of at least C-.

### **BIO 371M. Neuronal Basis of Brain and Behavior.**

The nervous system, with emphasis on vertebrate neurobiology. Three lecture hours and one discussion hour a week for one semester. Biology 365R and 371M may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 472L. Taxonomic Plant Anatomy.**

An advanced course emphasizing those aspects of plant anatomy that are most reliable and useful for systematic purposes. Three lecture hours and two laboratory hours a week for one semester. Biology 472L and 487G may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 374 and 174L with a grade of at least C- in each.

### **BIO 373. Ecology.**

An introduction to ecology, the study of relationships among organisms and between organisms and their environment; adaptations, population, communities, and ecosystems. Includes both plants and animals and both terrestrial and aquatic ecosystems. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 373L. Ecology Laboratory.**

Intensive field ecology. Includes group field experiment and observation, independent projects, and field trips to other vegetation zones. Students complete weekly write-ups of observation and data analysis, reports of independent projects, and an oral presentation on an independent project. Four laboratory hours and two workshop/lecture hours a week for one semester. Prerequisite: Credit or registration for Biology 373.

### **BIO 374. Plant Anatomy with Histological Techniques.**

Tissue organization and cellular details of stems, roots, and leaves of seed plants, with emphasis on development and function. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and concurrent enrollment in Biology 174L.

### **BIO 174L. Laboratory in Plant Anatomy and Histological Techniques.**

Demonstration of cellular details and tissue systems of plant organs; instruction in the preparation of plant materials for histological examination. Three laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Biology 374.

### **BIO 375. Conservation Biology.**

Application of principles of ecology to the preservation of wild plant and animal species and to the preservation, management, and restoration of natural and seminatural ecosystems. Emphasis on scientific, biological aspects of issues such as endangered species protection, preserve design, and forest management. Three lecture hours a week

for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-, and Biology 357, 359J, or 373 with a grade of at least C-.

### **BIO 177, 277, 377. Undergraduate Research.**

Laboratory or field research in the various fields of biological science under the supervision of one or more faculty members. Supervised individual research. Up to three semester hours may be counted toward the major requirement for the Bachelor of Arts degree with a major in biology. May be repeated for credit. Prerequisite: Biology 325 or 325H with a grade of at least C-, and written consent of instructor.

### **BIO 478L. Comparative Vertebrate Anatomy.**

Study of vertebrate morphology from developmental anatomy to the function, biomechanics, and phylogenetic relationships of living and fossil taxa. Three lecture hours and four laboratory hours a week for one semester. Biology 478L and Kinesiology 324K may not both be counted. Prerequisite: Biology 325 or 325H with a grade of at least C-.

### **BIO 478T. Natural Resource Management.**

Land management, policy and regulation development, and ecological "footprint" evaluation. Students have the opportunity for practical application of these subjects through off-campus field projects. Three lecture hours and two hours of discussion or fieldwork a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-; and one of the following courses or consent of instructor: Biology 351, 357, 373, 375, Geography 334, 346.

### **BIO 379G. Advanced Mammalian Genetics.**

Molecular developmental genetics and review of classical genetics. Possible topics include but are not limited to cancer, AIDS, forensic genetics, genomics, and gene therapy. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least B-.

### **BIO 379H, 679H. Honors Tutorial Course.**

Original laboratory or field research project under the direction of a faculty mentor, leading to a thesis or research presentation for students in the honors program in biology. The equivalent of three or six lecture hours a week for one semester. May be repeated for credit, but no more than six hours may be counted toward a degree in biology. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.

### **BIO 379J. Regulation of Eukaryotic Gene Expression.**

Enrollment is limited to upper-division undergraduates. Study of gene expression and its regulation in eukaryotes at the transcriptional and post-transcriptional levels. Includes transcription, RNA splicing, polyadenylation, RNA and RNA-protein interactions. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-; and Chemistry 339K and 339L, or Chemistry 369.

## **Public Health: PBH**

### **Lower-Division Courses**

#### **PBH 317. Introduction to Public Health.**

Same as Biology 317. Overview and basic principles of public health, including the public health system, concepts and tools for measuring health in populations, the relationship between public health and the medical care system, and the role of law and government in public health. Three lecture hours a week for one semester.

## **Upper-Division Courses**

#### **PBH 334. Global Health.**

Same as Biology 334. Global health issues, including the principles of global health, the burden of morbidity and mortality, health determinants, health care and public health systems, socioeconomic development, and human rights. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

#### **PBH 338. Environmental Health.**

Same as Biology 338. Introduction to the major areas of environmental health, including hazards in the environment, the effects of environmental contaminants, and various approaches to addressing major environmental health problems. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

#### **PBH 341R. Public Health Research.**

Same as Biology 341R. Students conduct public health research, mentored by professionals at public health practice agencies or faculty at graduate schools of public health throughout Texas. An average of twelve hours of fieldwork a week for a total of at least 180 hours. May be repeated for credit. Prerequisite: Biology 325 or 325H with a grade of at least C-; students must also submit a proposal to the instructor.

#### **PBH 354. Epidemiology.**

Same as Biology 354. Introduction to basic principles and concepts in epidemiology, including descriptive epidemiology, association and causation, basic epidemiological study design, evidence-based decision analysis, and applications of epidemiology methods to basic and clinical science. Three lecture hours a week for one semester. Prerequisite: Biology 317 or Public Health 317 with a grade of at least C-, and Biology 325 or 325H with a grade of at least C-.

#### **PBH 358D. Health Policy and Health Systems.**

Covers the essentials of health policy and law, including the ways that policy and legal issues impact health care and public health systems. Three lecture hours a week for one semester. Public Health 358D and Sociology 358D may not both be counted. Prerequisite: Upper-division standing, and Biology 317 or Public Health 317 with a grade of at least B-.

#### **PBH 368D. Social Context of Public Health.**

An introduction to the social and behavioral theories that inform the discipline of public health, including practical examples of the ways that these theories are used to understand health-related behaviors and health promotion. Includes data on population distributions of mortality and morbidity, health inequalities, and how underlying social structures impact the health of individuals and communities. Three lecture hours a week for one semester. Public Health 368D and Sociology 368D may not both be counted. Prerequisite: Upper-division standing, and Biology 317 or Public Health 317 with a grade of at least B-.

## **Department of Chemistry and Biochemistry**

Students seeking the degree of Bachelor of Science in Chemical Engineering, Bachelor of Science in Chemistry, or Bachelor of Science in Physics must take the University of Texas at Austin Test for Credit in

Chemistry 301 if they were admitted to the University with high school credit in chemistry. Engineering majors in areas other than chemical engineering are also encouraged to take the test. Students with three semesters or more of high school chemistry that included laboratory experience, or credit for Chemistry 301 or 301H, are encouraged to take the University of Texas at Austin Test for Credit in Chemistry 302. These tests are offered only in Austin. Information about them is available at <http://ctl.utexas.edu/programs-and-services/student-testing-services>.

Each student planning to register for a chemistry course should consult an adviser in his or her major area to determine whether specific courses are required.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Biochemistry: BCH

### Lower-Division Courses

#### **BCH 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Biochemistry.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### **BCH 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Biochemistry.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Chemistry: CH

### Lower-Division Courses

#### **CH 301 (TCCN: CHEM 1311). Principles of Chemistry I.**

Three lecture hours a week for one semester. Some sections also require one enrichment/discussion hour a week; these are identified in the Course Schedule. Chemistry 301 and 301H may not both be counted. Prerequisite: Credit with a grade of at least C- or registration for one of the following: Mathematics 305G, 408C, 408D, 408K, 408L, 408M, 408N, 408S, Statistics and Scientific Computation 302; and an appropriate score on the ALEKS chemistry placement examination.

#### **CH 301H. Principles of Chemistry I: Honors.**

Three lecture hours a week for one semester. Chemistry 301 and 301H may not both be counted. Prerequisite: Credit with a grade of at least C- or registration for one of the following: Mathematics

408C, 408D, 408K, 408L, 408M, 408N, 408S; an appropriate score on the ALEKS chemistry placement examination; and consent of the departmental honors adviser.

#### **CH 302 (TCCN: CHEM 1312). Principles of Chemistry II.**

Development and application of concepts, theories, and laws underlying chemistry. Three lecture hours a week for one semester. Some sections also require one enrichment/discussion hour a week; these are identified in the Course Schedule. Chemistry 302 and 302H may not both be counted. Prerequisite: Chemistry 301 or 301H with a grade of at least C-; and credit with a grade of at least C- or registration for one of the following: Mathematics 408C, 408D, 408K, 408L, 408M, 408N, 408S.

#### **CH 302H. Principles of Chemistry II: Honors.**

Three lecture hours a week for one semester. Chemistry 302 and 302H may not both be counted. Prerequisite: Chemistry 301 or 301H with a grade of at least C-; credit with a grade of at least C- or registration for one of the following: Mathematics 408C, 408D, 408K, 408L, 408M, 408N, 408S; and consent of the departmental honors adviser.

#### **CH 303. Mathematical Introduction to Theories of Matter.**

Introduction to the quantum theoretic description of atoms, molecules, solids, nuclei, elementary particles, and cosmology. Matrix mechanics and group theory. Three lecture hours a week for one semester. Chemistry 303 may be used instead of either Chemistry 302 or Chemistry 301 and 302 in fulfilling the prerequisites of other chemistry courses, except by students seeking the Bachelor of Science in Chemistry degree. Chemistry 303 may be counted in addition to Chemistry 301 and 302. Not recommended by the Health Professions Office for Medical College Admission Test preparation.

#### **CH 204 (TCCN: CHEM 1111, CHEM 1112). Introduction to Chemical Practice.**

Introduction to the techniques of modern experimental chemistry. Designed to provide basic laboratory and analytical skills. May include organic, analytical, and physical chemistry, as well as materials science. Four laboratory hours and one hour of discussion a week for one semester. Some sections may also require one hour of computer laboratory a week. Chemistry 204 and 317 may not both be counted. Prerequisite: Credit or registration for Chemistry 302.

#### **CH 304K. Chemistry in Context I.**

Designed for nonscience majors. Chemistry 304K and 305 form a two-semester sequence designed to fulfill the science requirement for students not majoring in science or engineering. Issues of contemporary interest and importance, such as ozone depletion and global warming, motivate the discussion; the underlying chemistry is developed as needed. Social, political, economic, and ethical implications of scientific developments and science policy are considered. Chemistry 304K addresses the nature of matter, energy, chemical reactions, and chemical thermodynamics. Not intended as preparation for Chemistry 301. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences. May not be counted by students with credit for Chemistry 301 with a grade of at least C-.

#### **CH 305. Chemistry in Context II.**

Designed for nonscience majors. Chemistry 304K and 305 form a two-semester sequence designed to fulfill the science requirement for students not majoring in science or engineering. Chemistry 305 addresses water chemistry, acids and bases, elementary organic



chemistry, polymers, pharmaceuticals, nutrition, and genetics. Three lecture hours a week for one semester. May not be counted toward a degree in the College of Natural Sciences. May not be counted by students with credit for Chemistry 302 with a grade of at least C-. Prerequisite: Chemistry 301 or 304K.

#### **CH 206K. Undergraduate Research.**

Introduction to research practices; supervised individual undergraduate research in chemistry. Six to ten laboratory hours a week for one semester. May be repeated for credit, but no more than four semester hours may be counted toward a degree in chemistry or biochemistry. Hours beyond four must be taken on the pass/fail basis. May be repeated for credit. Prerequisite: Consent of the undergraduate adviser in chemistry.

#### **CH 107, 207. Conference Course.**

Supervised study in chemistry. One discussion hour a week for one semester, with additional hours to be arranged. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May not be counted toward a major or minor in chemistry or biochemistry. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

#### **CH 207K. Introduction to Science Outreach in Elementary Schools.**

Students develop and present level-appropriate science laboratories to students in local elementary schools. A hands-on, discovery learning approach to science is emphasized. One class hour and four hours of fieldwork a week for one semester. May be counted as an elective only. Prerequisite: Consent of the UTeach adviser in the College of Natural Sciences.

#### **CH 207L. Peer Teaching.**

Students act as peer teaching assistants in other University chemistry courses, mainly large general chemistry lecture sections. Two hours of lecture and training a week for one semester, and two to three hours a week leading student group discussions. May not be counted toward any degree in chemistry or biochemistry. Prerequisite: Chemistry 301 and consent of the coordinator of the Peer Teaching Assistant Program.

#### **CH 108, 208, 308, 408. Topics in Chemistry.**

For each semester hour of credit earned, one lecture hour a week for one semester; some topics may require additional discussion hours. Some sections are offered on the pass/fail basis only. May not be counted toward a major or minor in chemistry or biochemistry. May be repeated for credit when the topics vary.

#### **CH 110K (TCCN: CHEM 2123). Organic Chemistry Laboratory.**

Primarily for premedical, predoctoral, life sciences, and pharmacy majors. One lecture hour and three laboratory hours a week for one semester. May not be counted by students with credit for Chemistry 210C. Chemistry 110K and 118K may not both be counted. Prerequisite: Chemistry 302 and 204 with a grade of at least C- in each, and credit or registration for Chemistry 310M.

#### **CH 110L (TCCN: CHEM 2125). Organic Chemistry Laboratory.**

Primarily for premedical, predoctoral, life sciences, and pharmacy majors. One lecture hour and three laboratory hours a week for one semester. Only one of the following may be counted: Chemistry 210C,

110L, 118L. Prerequisite: Chemistry 310M with a grade of at least C-, 110K, and credit or registration for Chemistry 310N.

#### **CH 317. Descriptive Inorganic Chemistry for Chemistry and Biochemistry Majors.**

Synthesis and properties of inorganic, bioinorganic, and organometallic compounds. One lecture hour and six laboratory hours a week for one semester. Chemistry 204 and 317 may not both be counted. Prerequisite: Credit or registration for Chemistry 302.

#### **CH 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Chemistry.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **CH 220C. Organic Chemistry Laboratory.**

One lecture hour and five laboratory hours a week for one semester. Only one of the following may be counted: Chemistry 210C, 110L, 118L, 220C, 128L. Prerequisite: Credit or registration for Chemistry 310N or 320N; and the following coursework with a grade of at least C- in each: Chemistry 204 or 317; and 310M, 318M, 320M, or 328M.

#### **CH 320M. Organic Chemistry I.**

Primarily for premedical, predoctoral, life sciences, and pharmacy majors. Development of organic chemical structure, nomenclature, and reactivity. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610A, 310M, 618A, 318M, 320M, 328M. Prerequisite: Chemistry 302 or 302H with a grade of at least C-, and credit or registration for Chemistry 204 or 317.

#### **CH 320N. Organic Chemistry II.**

Primarily for premedical, predoctoral, life sciences, and pharmacy majors. The development of organic chemical functional group reactivity, reaction mechanics, with analogous aqueous transformations in biochemical settings. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610B, 310N, 618B, 318N, 320N, 328N. Prerequisite: Credit or registration for Chemistry 210C or 220C; and the following coursework with a grade of at least C- in each: Chemistry 204 or 317; and 310M, 318M, 320M, or 328M.

#### **CH 128K. Organic Chemistry Laboratory.**

One lecture hour and three laboratory hours a week for one semester. May not be counted by students with credit for Chemistry 210C or 220C. Only one of the following may be counted: Chemistry 110K, 118K, 128K. Prerequisite: Credit or registration for Chemistry 318M or 328M; and the following coursework with a grade of at least C-: Chemistry 302 or 302H; and 204 or 317.

#### **CH 128L. Organic Chemistry Laboratory.**

One lecture hour and three laboratory hours a week for one semester. May not be counted by students with credit for Chemistry 210C or 220C. Only one of the following may be counted: Chemistry 110L, 118L, 128L. Prerequisite: Credit or registration for Chemistry 318N or

328N; and the following coursework with a grade of at least C- in each: Chemistry 118K or 128K; and 318M or 328M.

### **CH 328M. Organic Chemistry I.**

Primarily for chemistry and chemical engineering majors. The development of organic chemical structure, nomenclature, and reactivity. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610A, 310M, 618A, 318M, 320M, 328M. Prerequisite: Credit or registration for Chemistry 118K or 128K; and the following coursework with a grade of at least C- in each: Chemistry 302 or 302H; and 204 or 317.

### **CH 328N. Organic Chemistry II.**

Primarily for chemistry and chemical engineering majors. The development of organic chemical reactivity, with an emphasis on synthesis and polymers. Three lecture hours a week for one semester. Only one of the following may be counted: Chemistry 610B, 310N, 618B, 318N, 320N, 328N. Prerequisite: Credit or registration for Chemistry 118L or 128L; and the following coursework with a grade of at least C- in each: Chemistry 318M or 328M, and 118K or 128K.

### **CH 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Chemistry.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Chemistry and Biochemistry. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **CH 329W. Cooperative Chemistry/Biochemistry.**

This course covers the work period of chemistry and biochemistry students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Chemistry 310N or 318N with a grade of at least C-, application to become a member of the Cooperative Chemistry/Biochemistry Program, and consent of the Department of Chemistry and Biochemistry undergraduate adviser.

### **CH 431. Inorganic Chemistry.**

Survey of the chemistry of the elements, incorporating both descriptive and theoretical aspects. Open-ended experiments designed to illustrate a variety of synthetic techniques. Three lecture hours and three laboratory hours a week for one semester. Prerequisite: Chemistry 302, and either Chemistry 204 or 317 with a grade of at least C-.

### **CH 339J. Chemical and Synthetic Biology.**

Same as Systems and Synthetic Biology 339J. Covers enzymatic reaction mechanisms and how they can be manipulated using tools both from chemistry and molecular biology. Includes the study of enzymatic reaction mechanisms and the engineering of metabolic pathways and organisms. Course is designed for students pursuing careers in pharmaceutical and biotechnology careers. Three lecture

hours a week for one semester. Prerequisite: Chemistry 310M, 318M, 320M, or 328M with a grade of at least C-.

### **CH 339K. Biochemistry I.**

Chemistry 339K and 339L should be taken as a two-semester sequence. Students who do not plan to take Chemistry 339L should register for Chemistry 369 rather than 339K. Structure and function of amino acids, proteins, carbohydrates, lipids, and nucleic acids. Three lecture hours a week for one semester. Chemistry 339K and 369 may not both be counted. Prerequisite: Chemistry 310M, 318M, 320M, or 328M with a grade of at least C-.

### **CH 339L. Biochemistry II.**

A second-semester biochemistry course designed for chemistry, premedical, pre dental, and life sciences majors. Biosynthesis of nucleic acids and proteins. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K with a grade of at least C-.

### **CH 341. Special Topics in Laboratory Chemistry.**

Examples of topics are physical measurements techniques; electronics for scientists; advanced synthetic chemistry (organic or inorganic); separation techniques. One lecture hour and six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Eight semester hours of coursework in organic chemistry and consent of the undergraduate adviser.

### **CH 644. Chemical Education: Secondary School.**

Issues and techniques in secondary school teaching of chemical sciences. Three lecture hours a week for two semesters. For students seeking the Bachelor of Science in Chemistry: Teaching Option degree. May not be counted toward any other degree in chemistry or biochemistry. Prerequisite: For 644A, eight semester hours of coursework in organic chemistry and credit or registration for Chemistry 144K; for 644B, Chemistry 644A, 144K, and credit or registration for Chemistry 144L.

### **CH 144K. Chemical Education Laboratory I.**

Development of classroom demonstrations, laboratory experiments, and teaching aids for secondary school teaching of the chemical sciences. Two laboratory hours a week for one semester. For students seeking the Bachelor of Science in Chemistry: Teaching Option degree. May not be counted toward any other degree in chemistry or biochemistry. Prerequisite: Credit or registration for Chemistry 644A.

### **CH 144L. Chemical Education Laboratory II.**

Development of classroom demonstrations, laboratory experiments, and teaching aids for secondary school teaching of the chemical sciences. Two laboratory hours a week for one semester. For students seeking the Bachelor of Science in Chemistry: Teaching Option degree. May not be counted toward any other degree in chemistry or biochemistry. Prerequisite: Credit or registration for Chemistry 644B.

### **CH 353. Physical Chemistry I.**

For chemistry and chemical engineering majors. Equations of state, laws of thermodynamics, ideal and nonideal solutions, phase equilibria, thermodynamics of chemical reactions. Three lecture hours a week for one semester. Chemistry 353 and 353M may not both be counted. Prerequisite: Mathematics 408C and 408D, or two of the following: Mathematics 408K, 408L, 408M, 408N, 408S; Chemistry 302 or 302H with a grade of at least C-; and Physics 316 and 116L, 303L and 103N, or 317L and 117N.

### **CH 153K. Physical Chemistry Laboratory.**

Three laboratory hours a week for one semester. Prerequisite: Chemistry 353 or 353M with a grade of at least C-.

### **CH 353M. Physical Chemistry I for Life Sciences.**

For biochemistry and biology majors. Thermochemistry and kinetics of reactions in cells, enzyme catalysis, electrical and transport properties of membranes. Three lecture hours a week for one semester.

Chemistry 353 and 353M may not both be counted. Prerequisite: Mathematics 408C and 408D, or two of the following: Mathematics 408K, 408L, 408M, 408N, 408S; Chemistry 302 or 302H with a grade of at least C-; and Physics 316 and 116L, 303L and 103N, or 317L and 117N.

### **CH 354. Quantum Chemistry and Spectroscopy.**

Fundamental principles of quantum mechanics, exactly soluble model problems, electronic structure of atoms and molecules, spectroscopy. Three lecture hours a week for one semester.

Prerequisite: Mathematics 408C and 408D, or two of the following: Mathematics 408K, 408L, 408M, 408N, 408S; and Physics 316 and 116L.

### **CH 154K. Physical Chemistry Laboratory.**

Three laboratory hours a week for one semester. Prerequisite: Chemistry 353 or 353M with a grade of at least C-, and credit or registration for Chemistry 354 or 354L.

### **CH 354L. Physical Chemistry II.**

Molecular energy levels, statistical thermodynamics (macroscopic thermodynamic functions from molecular input), and physical and chemical kinetics, with emphasis on the molecular viewpoint. Three lecture hours a week for one semester. May be counted toward a biochemistry or chemistry degree. Chemistry 354, rather than this course, is recommended for students planning graduate study in chemistry. Prerequisite: Chemistry 353 or 353M with a grade of at least C-.

### **CH 354S. Elements of Spectroscopy.**

Primarily for chemistry and biochemistry majors. Fundamentals of spectroscopy, with knowledge of elementary quantum mechanics. Separation of electronic, vibrational, rotational and spin quantum states; interaction of radiation and matter; theory and application of different types of spectroscopy including photoelectron, electronic absorption and emission, vibrational (infrared and Raman), rotational and magnetic resonance. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each: Chemistry 353 or 353M, and 354 or 354L.

### **CH 455. Fundamentals of Analytical Chemistry.**

For biochemistry, engineering, and clinical laboratory science majors. Chemical and instrumental methods in analytical chemistry. Three lecture hours and three laboratory hours a week for one semester. Chemistry 455 and 456 may not both be counted. Prerequisite: Chemistry 302 and either 204 or 317, with a grade of at least C- in each.

### **CH 456. Analytical Chemistry.**

For chemistry majors. Three lecture hours and three laboratory hours a week for one semester. Chemistry 455 and 456 may not both be counted. Prerequisite: Chemistry 302 or 302H with a grade of at least C-, and Chemistry 204 or 317 with a grade of at least C-.

### **CH 364C. Bioinformatics.**

Same as Systems and Synthetic Biology 364C. Restricted to biochemistry majors. Topics include physical methods for the study of macromolecules; chemistry of proteins; enzyme chemistry; regulatory mechanisms for gene expression; protein-nucleic acid interactions.

Three lecture hours a week for one semester. Prerequisite: Chemistry 339K with a grade of at least B, Computer Science 303E or 312 with a grade of at least C-, and Statistics and Scientific Computation 321 with a grade of at least C-.

### **CH 364D. Macromolecular Structure Determination.**

Restricted to biochemistry majors. Emphasis on X-ray crystallography and nuclear magnetic resonance (NMR) spectroscopy of proteins.

Investigation of theories and practices of the most relevant techniques in macromolecular structure determination. Use of the X-ray and NMR facilities to collect data that is used to solve protein structures. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K and 339L with a grade of at least B in each, and consent of instructor.

### **CH 364E. Systems Biology.**

Restricted to biochemistry majors. Survey of current high-throughput technologies and computational methods for generating data and integrating information at all levels of biological organization. Emphasis on how hypotheses can be generated and tested with these techniques to better understand how model organisms function and evolve. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K and 339L with a grade of at least B in each, and consent of instructor.

### **CH 364F. Astrobiology.**

Restricted to biochemistry majors. An overview of the science being used in the search for extraterrestrial life; life origins, earth history, evolution, metabolism of extremophiles, biochemistry, and astronomy. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K and 339L with a grade of at least B in each, and consent of instructor.

### **CH 365D. Structure and Function of Proteins and Nucleic Acids.**

Restricted to biochemistry majors. Exploration of the structures and functions of proteins and nucleic acids, utilizing quantitative methods to evaluate the roles of structural features in function and in developing new ways of thinking about the dynamics of macromolecules. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K, 339L, and 370 with a grade of at least B in each, and consent of instructor.

### **CH 367C. Materials Chemistry.**

Restricted to chemistry majors. Introduction to structural and physical properties of materials and synthetic strategies for making new materials in the nanoscale and mesoscale regimes, in addition to covering instrumental methods used to probe materials properties. Some aspects of applications (semiconductor devices, solar and fuel cells, smart and responsive materials) will be covered to illustrate the kinds of material properties that need to be considered in designing novel materials of specific function. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Chemistry 302 and 353 with a grade of at least C- in each. Chemistry 431 or 354L with a grade of at least C- is recommended.

### **CH 367L. Macromolecular Chemistry.**

Designed for chemistry and chemical engineering students. Occurrence, preparation, structure, and properties of macromolecular

substances. Three lecture hours a week for one semester. Prerequisite: Chemistry 310M and 310N or Chemistry 318M and 318N; Chemistry 210C, or 118K and 118L; and Chemistry 353 or 353M with a grade of at least C-.

### **CH 368. Advanced Topics in Chemistry.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: 310M and 310N or Chemistry 318M and 318N; Chemistry 353 or 353M with a grade of at least C-; and Chemistry 354 or 354L with a grade of at least C-.

**Topic 1: Research Methods: UTeach.** Restricted to students in the UTeach-Natural Sciences program. Students use mathematics and science skills to solve research problems.

### **CH 369. Fundamentals of Biochemistry.**

A survey course covering the basics of protein structure and function, carbon and nitrogen metabolism, and molecular biology of macromolecules. Three lecture hours a week for one semester. Chemistry 339K and 369 may not both be counted. May not be counted by biochemistry majors. Prerequisite: Chemistry 310M or 318M with a grade of at least C-.

### **CH 369K. Techniques of Research.**

Advanced laboratory practice and introduction to research. One lecture hour and six laboratory hours a week for one semester. May be taken for a letter grade no more than twice. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. May be repeated for credit. Prerequisite: Eight semester hours of coursework in organic chemistry; and six semester hours of upper-division chemistry courses approved by the undergraduate adviser's office, or consent of the undergraduate adviser in chemistry.

### **CH 369L. Biochemistry Laboratory.**

An introduction to modern fundamental techniques of biochemistry. Two lecture hours and seven laboratory hours a week for one semester. Prerequisite: Chemistry 339K and credit or registration for 339L.

### **CH 369T. Biotechnology Laboratory.**

Advanced techniques in biotechnology. Nine laboratory hours a week for one semester. Prerequisite: Consent of instructor.

### **CH 370. Physical Methods for Biochemistry.**

Theory of electrophoresis, ultracentrifugation, spectroscopy, electron microscopy, and diffraction as applied to biological macromolecules. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K with a grade of at least C-.

### **CH 371K. Science Outreach in Elementary Schools.**

Students develop and present level-appropriate science laboratories to students in local elementary schools. Students also plan and create the infrastructure needed to administer the science program in concert with the science curriculum at a specific elementary school. A hands-on, discovery learning approach to science is emphasized. One class hour and six hours of fieldwork a week for one semester. May be taken for a letter grade no more than twice. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. May be repeated for credit. Prerequisite: Upper-division standing, at least six hours of upper-division coursework in the College of Natural Sciences, and consent of the UTeach adviser in the College of Natural Sciences.

### **CH 372C. Chemistry Peer Mentors in Research and Teaching.**

Students work as peer mentors and assistants in the teaching of chemistry, with emphasis on developing instructional materials and laboratories that teach fundamental chemistry with real world data. Students mentor students for at least six hours a week in addition to other weekly meetings. May be taken for a letter grade no more than twice. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. May be repeated for credit. Prerequisite: Chemistry 301 or 301H and 302 or 302H with a grade of at least B in each, and consent of the undergraduate adviser.

### **CH 375K, 475K. Individual Study in Chemistry and Biochemistry.**

Supervised reading or individual tutorial sessions on advanced topics in chemistry and biochemistry. Three or four class hours a week for one semester. No more than six semester hours may be counted toward a degree in chemistry or biochemistry. May be repeated for credit. Prerequisite: Eight semester hours of coursework in organic chemistry, Chemistry 353, and consent of the undergraduate adviser.

### **CH 376K. Advanced Analytical Chemistry.**

Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Chemistry 353 and 456 with a grade of at least C- in each.

### **CH 379H. Chemistry Honors Tutorial Course.**

Laboratory research project in a specific field of chemistry under the supervision of one or more faculty members. Conference course. May be repeated once for credit. Must be taken in addition to the required hours for the Bachelor of Science in Chemistry degree. Students must enter no later than the first semester of the year of graduation. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.

## **Systems and Synthetic Biology: SSB**

### **Upper-Division Courses**

#### **SSB 339J. Chemical and Synthetic Biology.**

Same as Chemistry 339J. Covers enzymatic reaction mechanisms and how they can be manipulated using tools both from chemistry and molecular biology. Includes the study of enzymatic reaction mechanisms and the engineering of metabolic pathways and organisms. Course is designed for students pursuing careers in pharmaceutical and biotechnology careers. Three lecture hours a week for one semester. Prerequisite: Chemistry 310M, 318M, 320M, or 328M with a grade of at least C-.

#### **SSB 339Q. Systems Biology: Methods and Networks.**

Emphasis on understanding the methods used to gather and analyze a variety of systems level data, including genomics, proteomics, and metabolomics. Developing and testing network models of systems level data. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K with a grade of at least B; Computer Science 303E or 312 with a grade of at least C-; and Statistics and Scientific Computation 321 with a grade of at least C-.

#### **SSB 364C. Bioinformatics.**

Same as Chemistry 364C. Restricted to biochemistry majors. Topics include physical methods for the study of macromolecules; chemistry of proteins; enzyme chemistry; regulatory mechanisms for gene



expression; protein-nucleic acid interactions. Three lecture hours a week for one semester. Prerequisite: Chemistry 339K with a grade of at least B, Computer Science 303E or 312 with a grade of at least C-, and Statistics and Scientific Computation 321 with a grade of at least C-.

## Department of Computer Science

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate adviser in computer science. No student may enroll in any computer science course more than twice. No student may take more than three upper-division computer science courses in a semester without written consent of an undergraduate adviser in computer science.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### Computer Science: C S

#### Lower-Division Courses

##### **C S 301K. Foundations of Logical Thought.**

Introductory logic in the context of computing; introduction to formal notations; basic proof techniques; sets, relations, and functions. Three lecture hours a week for one semester. Some sections also require one discussion hour a week; these are identified in the Course Schedule.

##### **C S 302. Computer Fluency.**

An introduction to the fundamental concepts of computing: how computers work, what they can do, and how they can be used effectively. Some programming is required. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Credit for Computer Science 302 may not be earned after a student has received credit for Computer Science 303E, 305J, 307, 312, 312H, 314, or 314H. May not be counted toward a degree in computer science.

##### **C S 303E. Elements of Computers and Programming.**

Problem solving and fundamental algorithms for various applications in science and business and on the World Wide Web. Introductory programming in a modern object-oriented programming language. Three lecture hours or two lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 303E, 305J, 312, 312H. Credit for Computer Science 303E may not be earned after a student has received credit for Computer Science 307, 314, or 314H.

##### **C S 105. Computer Programming.**

An introduction to programming in a particular computer language. Students design and implement programs. One lecture hour a week for one semester. May be repeated for credit when the languages vary. Prerequisite: Computer Sciences 307, 313E, 314, 314H, or Electrical Engineering 422C (or 322C), with a grade of at least C-.

##### **C S 305J. Introduction to Computing.**

Introduction to computer science concepts. Programming in a modern object-oriented programming language. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 303E, 305J, 312, 312H. Credit for Computer Science 305J may not be earned after a student has received credit for Computer Science 307, 314, or 314H. Prerequisite: Some knowledge of and experience in computer programming; and credit with a grade of at least C- or registration for Mathematics 305G, or equivalent score on the SAT Mathematics Level 1 or Level 2 test.

##### **C S 307. Foundations of Computer Science.**

Fundamental computer science concepts: data types, data structures, algorithms, and programming; functions and recursion; abstraction and encapsulation. Correctness: specification, testing, and proving. Simple sorting and searching algorithms. Introduction to analysis of algorithms. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Computer Science 307, 314, 314H. Prerequisite: Credit or registration for Mathematics 408C, 408K, or 408N, or a score of at least 520 on the SAT Mathematics Level 1 or Level 2 test; and one of the following: one year of programming in high school, Computer Science 303E or 305J with a grade of at least C-, consent of instructor.

##### **C S 108. Software Systems.**

Introduction to the use of a particular software system. Students build applications that exploit the system being studied. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the pass/fail basis only. Prerequisite: Computer Science 307, 313E, 314, 314H, or Electrical Engineering 422C (or 322C), with a grade of at least C-.

##### **C S 109, 209, 309. Topics in Computer Science.**

For each semester hour of credit earned, one lecture hour a week for one semester. Some sections are offered on the pass/fail basis only. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

##### **C S 310. Computer Organization and Programming.**

Basic computer organization; machine representation of instructions and data; hardware/software interface. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 310, 310H, 429, 429H. Prerequisite: Computer Science 307 with a grade of at least C-.

##### **C S 310H. Computer Organization and Programming: Honors.**

Basic computer organization; machine representation of instructions and data; hardware/software interface. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 310, 310H, 429, 429H. Prerequisite: Computer Science 315 or 315H with a grade of at least C-, and consent of the honors director.

##### **C S 312. Introduction to Programming.**

First part of a two-part sequence in Java programming. Fundamental concepts of structured programming; procedures and data structures with a focus on problem solving strategies and implementation; introduction to concepts of informal specification, informal reasoning about program behavior, debugging, and ad hoc testing. Three lecture hours and one discussion hour a week for one semester. Only one of the following courses may be counted: Computer Science 303E, 305J, 312, 312H. Credit for Computer Science 312 may not be earned

after a student has received credit for Computer Science 314 or 314H. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 305G, or a score of 70 on the ALEKS placement examination.

### **C S 312H. Introduction to Programming: Honors.**

Restricted to computer science majors. First part of a two-part sequence in Java programming. Fundamental concepts of structured programming; procedures and data structures with a focus on problem solving strategies and implementation; introduction to concepts of informal specification, informal reasoning about program behavior, debugging, and ad hoc testing. Three lecture hours and one discussion hour a week for one semester. Only one of the following courses may be counted: Computer Science 303E, 305J, 312, 312H. Credit for Computer Science 312H may not be earned after a student has received credit for Computer Science 314 or 314H. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 305G, or a score of 70 on the ALEKS placement examination; and consent of the honors director.

### **C S 313E. Elements of Software Design.**

Object-oriented design of software in a modern high-level language, using software library packages. Introduction to elementary data structures and complexity of algorithms. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 303E, 305J, 312, or 312H with a grade of at least C-.

### **C S 313H. Logic, Sets, and Functions: Honors.**

Propositional and predicate logic; proof techniques, including induction, sets, relations, and functions. Introduction to the analysis of algorithms and techniques for proving properties of programs. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Prerequisite: Consent of the honors director.

### **C S 313K. Logic, Sets, and Functions.**

Propositional and predicate logic; proof techniques, including induction, sets, relations, and functions. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 313H, 313K, Philosophy 313, 313K, 313Q. Prerequisite: Credit or registration for Mathematics 408C, 408K, or 408N.

### **C S 314. Data Structures.**

Second part of a two-part sequence in Java programming. Introduction to specifications, simple unity testing, and debugging; building and using canonical data structures; algorithm analysis and reasoning techniques such as assertions and invariants. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 307, 314, 314H. Only one of the following may be counted: Computer Science 314, 314H, 315, 315H. Prerequisite: Computer Science 312 or 312H with a grade of at least C-.

### **C S 314H. Data Structures: Honors.**

Second part of a two-part sequence in Java programming. Introduction to specifications, simple unity testing, and debugging; building and using canonical data structures; algorithm analysis and reasoning techniques such as assertions and invariants. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 307, 314, 314H. Only one of the following may be counted: Computer Science 314, 314H,

315, 315H. Prerequisite: Computer Science 312 or 312H with a grade of at least C-, and consent of the honors director.

### **C S 315. Algorithms and Data Structures.**

Implementation of basic data structures, including stacks, queues, lists, priority queues, trees, binary search trees, graphs, and sets; recursion; efficient sorting and searching algorithms; hashing; and multithreaded programs. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Computer Science 314, 314H, 315, 315H. Prerequisite: Computer Science 307 with a grade of at least C-, and credit or registration for Computer Science 313K.

### **C S 315H. Algorithms and Data Structures: Honors.**

Data types, data structures, algorithms, and programming; functions and recursion; abstraction and encapsulation. Correctness: specification, testing, proving. Introduction to analysis of algorithms. Implementation and use of basic data structures, including stacks, queues, lists, priority queues, trees, binary search trees, graphs, sets. Efficient sorting and searching algorithms; hashing; and multithreaded programs. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Computer Science 314, 314H, 315, 315H. Prerequisite: Consent of the honors director.

### **C S 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Computer Science.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Computer Science. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **C S 120N, 220N, 320N. Topics in Computer Science for Nonmajors.**

For each semester hour of credit earned, one lecture hour a week for one semester. May not be counted toward a degree in computer science. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **C S 321H. Functional and Symbolic Programming: Honors.**

Introduction to functional and symbolic programming and to the use of these concepts throughout computer science. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Computer Science 337 or 337H, and consent of the honors director.

### **C S 323E. Elements of Scientific Computing.**

Fundamentals of software issues related to scientific computing. Topics include floating-point computations, numerical computation errors, interpolation, integration, solution of linear systems of equations, optimization, and initial value problems of ordinary differential equations. Implementation of algorithms are investigated using MATLAB for matrix and vector computations. Examples are drawn from a variety of science and mathematics areas. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Computer Science 323E and 323H may not both be counted. Prerequisite: Computer Science 303E or the

equivalent; Mathematics 408C, 408K, or 408N; Mathematics 408D, 408M, or 427L; and credit with a grade of at least C- or registration for Mathematics 341 or 340L.

### **C S 323H. Elements of Scientific Computing: Honors.**

Fundamentals of software issues related to scientific computing. Topics include floating-point computations, numerical computation errors, interpolation, integration, solution of linear systems of equations, optimization, and initial value problems of ordinary differential equations. Implementation of algorithms are investigated using MATLAB for matrix and vector computations. Examples are drawn from a variety of science and mathematics areas. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Computer Science 323E and 323H may not both be counted. Prerequisite: Computer Science 303E, 305J, or 307; Mathematics 408D, 408M, or 427L; credit with a grade of at least C- or registration for Mathematics 341 or 340L; and consent of the honors director.

### **C S 324E. Elements of Graphics and Visualization.**

Basics of two- and three-dimensional computer graphics systems, modeling and rendering, and selected graphics software APIs. Other topics may include interactive graphics, animation, graphical user interfaces, and the graphical presentation of information. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 307, 313E, 314, 314H, or Electrical Engineering 422C (or 322C) with a grade of at least C-.

### **C S 326E. Elements of Networking.**

Introduction to the principles and basic concepts of the Internet. Networking applications and protocols. Simple client/server applications. Other topics may include network technologies and topologies, packet and circuit switching, LANS and WANS, Internet security, and network management. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 307, 313E, 314, 314H, or Electrical Engineering 422C (or 322C) with a grade of at least C-.

### **C S 327E. Elements of Databases.**

A practical introduction to database management systems, with discussion of database administration and management. Survey of logical modeling, database design with a focus on relational databases, SQL query language, and current applications. Topics may include data integrity, performance, concurrency, transaction processing, recovery, security, and Web applications. Three lecture hours a week for one semester. May not be counted toward a degree in computer science. Prerequisite: Computer Science 307, 313E, 314, 314H, or Electrical Engineering 422C (or 322C) with a grade of at least C-.

### **C S 429. Computer Organization and Architecture.**

Restricted to computer science majors. An introduction to low-level computer design ranging from the basics of digital design to the hardware/software interface for application programs. Includes basic systems principles of pipelining and caching, and requires writing and understanding programs at multiple levels. Four lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Computer Science 310, 310H, 429, 429H. Prerequisite: Computer Science 314 or 314H with a grade of at least C-.

### **C S 329E. Topics in Elements of Computing.**

Three lecture hours a week for one semester. May not be counted toward a degree in computer science. May be repeated for credit when the topics vary. Prerequisite: Computer Science 303E or the equivalent with a grade of at least C-.

### **C S 429H. Computer Organization and Architecture: Honors.**

Restricted to computer science majors. An introduction to low-level computer design ranging from the basics of digital design to the hardware/software interface for application programs. Includes basic systems principles of pipelining and caching, and requires writing and understanding programs at multiple levels. Four lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Computer Science 310, 310H, 429, 429H. Prerequisite: Computer Science 314 or 314H with a grade of at least C-, and consent of the honors director.

### **C S 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Computer Science.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Computer Science. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **C S 329W. Cooperative Computer Science.**

This course covers the work period of computer science students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. However, no more than three semester hours may be counted toward the major requirement. The student's first registration must be on the pass/fail basis; the second must be on the letter-grade basis. Prerequisite: Computer Science 336 or 336H with a grade of at least C-, and consent of the undergraduate adviser.

### **C S 234. Technical Writing.**

Application of techniques and strategies of effective technical writing, and of conventions used in documents such as letters, memos, proposals, abstracts, and reports. Two lecture hours a week for one semester. Computer Science 234 and 178 (Topic: Technical Writing) may not both be counted. May not be counted toward the number of hours in computer science required for the Bachelor of Science in Computer Science degree. Prerequisite: Computer Science 310, 310H, 429, or 429H with a grade of at least C-.

### **C S 336. Analysis of Programs.**

Proofs of program correctness and a survey of mathematical techniques useful in the analysis and verification of programs. Three lecture hours a week for one semester. Computer Science 336 and 336H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 313H or 313K; 314, 314H, 315, or 315H; and Mathematics 408C, 408L, or 408S.

### **C S 336H. Analysis of Programs: Honors.**

A survey of mathematical techniques useful in the analysis and verification of programs. Three lecture hours a week for one semester. Computer Science 336 and 336H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 313H or 313K; 314, 314H, 315, or 315H; Mathematics 408C, 408L, or 408S; and consent of the honors director.

### **C S 337. Theory in Programming Practice.**

Application of program-analysis theory to program design. Methodologies for large-scale program design. Designed to help students bring together theoretical and programming skills. Three lecture hours and one discussion hour a week for one semester. Computer Science 337 and 337H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 314, 314H, 315, or 315H; 336 or 336H; and Mathematics 408C, 408L, or 408S.

### **C S 337H. Theory in Programming Practice: Honors.**

Application of program-analysis theory to program design. Methodologies for large-scale program design. Designed to help students bring together theoretical and programming skills. Three lecture hours and one discussion hour a week for one semester. Computer Science 337 and 337H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 314, 314H, 315, or 315H; 336 or 336H; Mathematics 408C, 408L, or 408S; and consent of the honors director.

### **C S 439. Principles of Computer Systems.**

Restricted to computer science majors. An introduction to low-level software abstractions with an emphasis on the connection of these abstractions to underlying computer hardware. Key abstractions include threads, dynamic memory allocation, protection, and IO. Requires writing of synchronized multithreaded programs. Four lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Computer Science 439, 439H, 352, 352H. Only one of the following may be counted: Computer Science 439, 439H, 372, 372H. Prerequisite: Computer Science 429 or 429H with a grade of at least C-.

### **C S 439H. Principles of Computer Systems: Honors.**

Restricted to computer science majors. An introduction to low-level software abstractions with an emphasis on the connection of these abstractions to underlying computer hardware. Key abstractions include threads, dynamic memory allocation, protection, and IO. Requires writing of synchronized multi-threaded programs. Four lecture hours and two laboratory hours a week for one semester. Only one of the following may be counted: Computer Science 439, 439H, 352, 352H. Only one of the following may be counted: Computer Science 439, 439H, 372, 372H. Prerequisite: Computer Science 429 or 429H with a grade of at least C-, and consent of the honors director.

### **C S 341. Automata Theory.**

Introduction to the formal study of automata and of related formal languages with applications in computer science. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 341, 341H, Linguistics 340. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429 or 429H; 336 or 336H; 337 or 337H; and Mathematics 408D, 408M, or 427L.

### **C S 341H. Automata Theory: Honors.**

Introduction to the formal study of automata and of related formal languages with applications in computer science. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 341, 341H, Linguistics 340. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; 337 or 337H; Mathematics 408D, 408M, or 427L; and consent of the honors director.

### **C S 342. Neural Networks.**

Biological information processing; architectures and algorithms for supervised learning, self-organization, reinforcement learning, and neuro-evolution; hardware implementations and simulators; applications in engineering, artificial intelligence, and cognitive science. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 343. Artificial Intelligence.**

A survey of current artificial intelligence issues, including search, production systems, knowledge representation, knowledge-based systems, planning, natural language processing, and machine learning. Artificial intelligence programming projects are required. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 344M. Autonomous Multiagent Systems.**

Introduction to autonomous agents, with an emphasis on multiagent systems. Students use a robotics simulator. Emphasis on computer science research activities, including speaking, writing, programming, and working in groups. Three lecture hours a week for one semester. Computer Science 344M and 378 (Topic: Autonomous Multiagent Systems) may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 344R. Robotics.**

A survey of methods and techniques important for intelligent robotics. Students work in teams, applying these methods to get intelligent behavior from physical robots. Three lecture hours a week for one semester. Computer Science 344R and 378 (Topic: Robotics) may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 345. Programming Languages.**

Survey of significant concepts underlying modern programming languages, including syntax, functions, expressions, types, polymorphism, assignment, procedures, pointers, encapsulation, classes, and inheritance, with some discussion of implementation issues. Prominent programming paradigms, such as sequential, concurrent, object-oriented, functional, and logic programming. Illustrative examples drawn from a variety of current languages. Three lecture hours a week for one semester. Computer Science 345 and 345H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310,



310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 345H. Programming Languages: Honors.**

Survey of significant concepts underlying modern programming languages, including syntax, functions, expressions, types, polymorphism, assignment, procedures, pointers, encapsulation, classes, and inheritance, with some discussion of implementation issues. Prominent programming paradigms, such as sequential, concurrent, object-oriented, functional, and logic programming. Illustrative examples drawn from a variety of current languages. Three lecture hours a week for one semester. Computer Science 345 and 345H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; and consent of the honors director.

### **C S 346. Cryptography.**

A theoretical introduction to cryptography. Topics include private key cryptosystems, public key cryptosystems, digital signatures, secret sharing schemes, and the necessary mathematical background. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; 337 or 337H; and Mathematics 408D, 408M, or 427L.

### **C S 347. Data Management.**

Concepts of database design and database system implementation. Data models, query processing, database design theory, crash recovery, concurrent control, and distributed databases. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 349. Contemporary Issues in Computer Science.**

Social, professional, and ethical issues involved in the use of computer technology. Topics may include software engineering ethics, computer safety and reliability, constitutional issues, intellectual property, computer crime, societal impact, emerging technologies, and philosophical issues. Three lecture hours a week for one semester. Computer Science 349 and 378 (Topic: Contemporary Issues in Computer Science) may not both be counted. Prerequisite: Computer Science 336 or 336H with a grade of at least C-.

### **C S 351. LISP and Symbolic Computation.**

Symbolic computation for artificial intelligence, such as pattern-matching, unification, frames, flavors, semantic networks, deductive retrieval, rule-based and constraint-based inference. Substantial programming projects in LISP. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 352. Computer Systems Architecture.**

Computer architecture and organizational issues; structural and behavioral characteristics of system components; processor, memory hierarchy, and input/output issues; evaluation of design alternatives; the relationship between hardware and software. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 439, 439H, 352, 352H. Prerequisite: The following coursework with the grade of at least C- in each course: Computer

Science 310 or 310H; 336 or 336H; Electrical Engineering 316; and Mathematics 408D, 408M, or 427L.

### **C S 352H. Computer Systems Architecture: Honors.**

Computer architecture and organizational issues; structural and behavioral characteristics of system components; processor, memory hierarchy, and input/output issues; evaluation of design alternatives; the relationship between hardware and software. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 439, 439H, 352, 352H. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310 or 310H; 336 or 336H; Electrical Engineering 316; Mathematics 408D, 408M, or 427L; and consent of the honors director.

### **C S 353. Theory of Computation.**

A survey of the theoretical bases of computation: computational complexity (including the classes P and NP) and formal models of the semantics of programming languages. Three lecture hours a week for one semester. Prerequisite: Computer Science 341 or 341H with a grade of at least C-.

### **C S 354. Computer Graphics.**

Introduction to techniques for human-machine communication through imagery. Topics include display hardware, transformations, interactive techniques, geometric modeling, two- and three-dimensional display algorithms, graphics software systems architecture, and hidden-line and surface elimination. Projects are assigned and in-depth exploration is encouraged. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; and 340L or 341.

### **C S 356. Computer Networks.**

Introduction to computer networks, including common terminology, basic design issues, and types of networks and protocols. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; and credit with a grade of at least C- or registration for Computer Science 352 or 352H.

### **C S 357. Algorithms.**

Algorithmic paradigms: divide and conquer, greedy algorithms, dynamic programming, branch and bound. NP-completeness and topics selected from the following: cryptography algorithms, approximation algorithms, randomized algorithms, parallel algorithms, lower bounds. Three lecture hours a week for one semester. Computer Science 357 and 357H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; 337 or 337H; and Mathematics 408D, 408M, or 427L.

### **C S 357H. Algorithms: Honors.**

Algorithmic paradigms: divide and conquer, greedy algorithms, dynamic programming, branch and bound. NP-completeness and topics selected from the following: cryptography algorithms, approximation algorithms, randomized algorithms, parallel algorithms, lower bounds. Three lecture hours a week for one semester. Computer Science 357 and 357H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; 337 or

337H; Mathematics 408D, 408M, or 427L; and consent of the honors director.

### **C S 361. Introduction to Computer Security.**

Computer security, both in the abstract and in the context of real systems, including recognizing potential threats to confidentiality, integrity and availability, and developing familiarity with current security-related issues in computer science. Three lecture hours a week for one semester. Computer Science 361 and 378 (Topic: Introduction to Security) may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 367. Numerical Methods.**

Topics include systems of linear equations, numerical integration, ordinary differential equations, and nonlinear equations. Construction and use of large numerical systems. Influence of data representation and computer architecture on algorithm choice and development. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 367, Mathematics 368K, Physics 329. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; and 340L or 341.

### **C S 369. Systems Modeling.**

Introduction to performance modeling, with emphasis on computer systems. Modeling methodology, queueing network models, simulation, analysis of results. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 362K.

### **C S 370. Undergraduate Reading and Research.**

Supervised study of selected problems in computer science, by individual arrangement with supervising instructor. The equivalent of three lecture hours a week for one semester. No more than three semester hours may be counted toward a degree in computer science. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; and consent of the undergraduate adviser.

### **C S 371D. Distributed Computing.**

Models, principles, and fundamental protocols, including event ordering and global predicate detection, atomic commit, state-machine replication, rollback recovery, primary backup, consensus for synchronous and asynchronous systems, and byzantine fault-tolerance. Three lecture hours a week for one semester. Prerequisite: Computer Science 372 or 372H with a grade of at least C-, or consent of instructor.

### **C S 371P. Object-Oriented Programming.**

Programming using class derivation, inheritance, and dynamic polymorphism. Application of a simple object-oriented design methodology to several software development problems. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; 337 or 337H; and Mathematics 408D, 408M, or 427L.

### **C S 371R. Information Retrieval and Web Search.**

Introduction to traditional and recent methodologies for indexing, processing, querying, and classifying unstructured and semistructured textual data, including hypertext and World-Wide Web documents. Three lecture hours a week for one semester. Computer Sciences 371R and 378 (Topic: Intelligent Information Retrieval and Web Search) may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 371S. Object-Oriented Software Engineering.**

Object-oriented formulations of software systems as executable specifications, object-oriented analysis, design of software architectures, translation of high-level specification systems. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 372. Introduction to Operating Systems.**

Basic concepts of operating systems: concurrent process management, virtual memory, file systems, scheduling, and protection. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 439, 439H, 372, 372H. Prerequisite: Computer Science 337 or 337H, and 352 or 352H, with a grade of at least C- in each.

### **C S 372H. Introduction to Operating Systems: Honors.**

Basic concepts of operating systems: concurrent process management, virtual memory, file systems, scheduling, and protection. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 439, 439H, 372, 372H. Prerequisite: Computer Science 337 or 337H, and 352 or 352H, with a grade of at least C- in each; and consent of the honors director.

### **C S 373. Software Engineering.**

Introduction to current knowledge, techniques, and theories in large software system design and development. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L.

### **C S 375. Compilers.**

Formal description of languages, lexical analysis, syntax analysis, syntax-directed translation, run-time system management, code generation, code optimization, compiler-building tools. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; and Mathematics 408D, 408M, or 427L. Computer Science 341 or 341H, and 345 or 345H are recommended.

### **C S 376. Computer Vision.**

Explores computer vision, a discipline that develops methods that enable machines to interpret or analyze images and videos. Includes the study of image formation, feature detection, segmentation, multiple-view geometry, recognition and learning, and motion and tracking. Three lecture hours a week for one semester. Computer Science 376 and 378 (Topic: Computer Vision) may not both be counted. Prerequisite: The following coursework with a grade of at

least C- in each course: Mathematics 408D or 408M; 340L; and 362K or Statistics and Scientific Computation 321.

### **C S 377. Principles and Applications of Parallel Programming.**

Models of parallel computation, fundamental concepts for representation of parallel computation structures, study of representative parallel programming systems, programming of parallel algorithms and computations. Three lecture hours a week for one semester. Prerequisite: Computer Science 345 or 345H with a grade of at least C-.

### **C S 178, 378. Undergraduate Topics in Computer Science.**

One or three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Computer Science 178, 378, 178H, 378H. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites vary with the topic and are given in the Course Schedule.

### **C S 178H, 378H. Undergraduate Topics in Computer Science: Honors.**

One or three lecture hours a week for one semester. Only one of the following may be counted unless the topics vary: Computer Science 178, 378, 178H, 378H. May be repeated for credit when the topics vary. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; and consent of the honors director.

### **C S 379H. Computer Science Honors Thesis.**

Directed reading, research, and/or projects in areas of computer science, under supervision of a faculty member, leading to an honors thesis. The thesis must be approved by a committee of three readers. The equivalent of three lecture hours a week for one semester, by arrangement with a faculty member. Prerequisite: The following coursework with a grade of at least C- in each course: Computer Science 310, 310H, 429, or 429H; 336 or 336H; Mathematics 408D, 408M, or 427L; nine additional semester hours of upper-division coursework in computer science; and consent of the student's research supervisor and the departmental honors adviser.

## **School of Human Ecology**

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## **Human Development and Family Sciences: HDF**

### **Lower-Division Courses**

#### **HDF 304 (TCCN: TECA 1303). Family Relationships.**

Same as Women's and Gender Studies 301 (Topic 4: Family Relationships). The process of family interaction over the life cycle. Application of research findings to the understanding of relationships. Three lecture hours a week for one semester.

#### **HDF 304H. Family Relationships: Honors.**

The process of family interaction over the life cycle. Application of research findings to the understanding of relationships. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Consent of the department.

#### **HDF 312. Family Resource Management.**

Management concepts and theory in resource allocation used to meet family and life demands. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Human Development and Family Sciences 304.

#### **HDF 313 (TCCN: TECA 1354). Child Development.**

Same as Women's and Gender Studies 301 (Topic 5: Child Development). Motor, language, cognitive, social, and emotional development in the family context. Three lecture hours a week for one semester. Only one of the following may be counted: Human Development and Family Sciences 313, 313H, Women's and Gender Studies 301 (Topic 5). Prerequisite: Psychology 301 with grade of at least C-, and credit or registration for Human Development and Family Sciences 113L.

#### **HDF 313H. Child Development: Honors.**

Motor, language, social, and emotional development of children in the family context, with an emphasis on research findings and evaluations. Three lecture hours a week for one semester. Only one of the following may be counted: Human Development and Family Sciences 313, 313H, Women's and Gender Studies 301 (Topic 5: Child Development). Offered on the letter-grade basis only. Prerequisite: Psychology 301 with a grade of at least B-, credit or registration for Human Development and Family Sciences 113L, and consent of the department.

#### **HDF 113L. Child Development Laboratory.**

Students observe children at the University Child and Family Laboratory and relate their observations to the issues discussed in Human Development and Family Sciences 313 and 313H. One and one-half laboratory hours a week for one semester. Prerequisite: Psychology 301 with a grade of at least C- and credit or registration for Human Development and Family Sciences 313 or 313H.

#### **HDF 315L. Research Methods in Human Development and Family Sciences.**

Survey of research methods, including observational and experimental techniques. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Human Development and Family Sciences 304, 313, 113L, and Statistics and Scientific Computation 302.

#### **HDF 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Human Development and Family Sciences.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **HDF 322. Personal and Family Finance.**

Overview from the individual and family perspectives of financial planning tools, cash management, consumer credit, basic tax

preparation, and insurance selection. Includes application of knowledge to hypothetical situations and case studies. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **HDF 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Human Development and Family Sciences.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **HDF 335. Adult Development.**

Adulthood and the development, changes, and maturation that occurs, including the impact of relationships in adulthood. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Human Development and Family Sciences 313 and 113L.

### **HDF 337. Personal Relationships.**

Studies intimate relationships, including dating, cohabitation, marriage, and gay and lesbian relationships, as well as situational factors that may influence basic relationship processes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Human Development and Family Sciences 304 and 315L with a grade of at least C- in each.

### **HDF 338. Developmentally Appropriate Practices with Young Children.**

Developmentally appropriate practices, the importance of play, arranging environments, material selection, and a basic understanding about centers and activities for young children. Three lecture hours a week for one semester, with an additional three to six hours of fieldwork sometime during the semester. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313 and 113L, or Psychology 304.

### **HDF 340. Ethical, Philosophical, and Professional Development Issues.**

Restricted to human development and family sciences majors. Explores ethical and philosophical issues; personal values and choices; professional development and leadership; and career goals, opportunities, and challenges as they relate to human development and family sciences. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Human Development and Family Sciences 312 with a grade of at least C-.

### **HDF 342. Development of Psychopathology from Infancy through Adolescence.**

A developmental approach to the study of emotional and behavioral disorders from infancy through adolescence, including attachment disorders, autism, attention deficit disorder, conduct disorder, phobias, obsessive-compulsive disorder, depression, eating disorders, and schizophrenia. Also includes contrasting theories of psychopathology; epidemiology and outcomes of childhood disorders; therapeutic approaches and their efficacy, and developmental resilience. Three lecture hours a week for one semester. Human Development and Family Sciences 339 and 342 may not both be counted. Prerequisite: Upper-division standing, Human Development and Family Sciences 313, and 113L.

### **HDF 343. Human Development in Minority and Immigrant Families.**

Examines the theories of human development and cultural psychology as they apply to the developmental issues of minority and immigrant children and families. Three lecture hours a week for one semester. Human Development and Family Sciences 343 and 378K (Topic: Child Development in Minority and Immigrant Families) may not both be counted. Prerequisite: Upper-division standing and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.

### **HDF 345. Peer Relationships.**

Children's peer relationships from toddlerhood to adolescence. Three lecture hours a week for one semester. Human Development and Family Sciences 345 and 378K (Topic: Peer Relationships) may not both be counted. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.

### **HDF 347. Socioeconomic Problems of Families.**

An analysis of socioeconomic factors affecting the economic well-being of families and individuals. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and six semester hours of coursework in anthropology, economics, education, human development and family sciences, psychology, social work, or sociology.

### **HDF 351. Infant Development and Attachment Relationships.**

The development of emerging social language and cognitive capacities during infancy and toddlerhood and the development and consequences in infant-caregiver attachment security. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.

### **HDF 352. Field Experience: Community.**

Practicum in applied settings concerning human development and family sciences. One lecture hour and ten to twelve hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; the following coursework with a grade of at least C- in each course: Human Development and Family Sciences 304, 313, 113L, and 315L, Mathematics 408C or 408N, Psychology 301, and Statistics and Scientific Computation 302; Human Development and Family Sciences 312 and 340; nine additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the Department of Human Development and Family Sciences by May 1 for enrollment in the following spring semester, or by December 1 for enrollment in the following fall semester.

### **HDF 652F. Field Practicum: Community.**

Designed for students in their last semester. Practicum in settings concerning human development and family sciences. One lecture hour and at least twenty laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; the following coursework with a grade of at least C- in each course: Human Development and Family Sciences 304, 313, 113L, and



315L, Mathematics 408C or 408N, Psychology 301, and Statistics and Scientific Computation 302; Human Development and Family Sciences 312 and 340; nine additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the Department of Human Development and Family Sciences by May 1 for enrollment in the following spring semester, or by December 1 for enrollment in the following fall semester.

#### **HDF 352L. Field Experience: Early Childhood.**

Study and implementation of skills necessary for planning, guiding, and interacting with young children and their families, and for the management of facilities that provide services for young children. One lecture hour and ten to twelve hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; the following coursework with a grade of at least C- in each course: Human Development and Family Sciences 304, 313, 113L, and 315L, Mathematics 408C or 408N, Psychology 301, and Statistics and Scientific Computation 302; Human Development and Family Sciences 312, 338, 340, and 366; three additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the Department of Human Development and Family Sciences by May 1 for enrollment in the following spring semester, or by December 1 for enrollment in the following fall semester.

#### **HDF 652P. Field Practicum: Early Childhood.**

Designed for students in their last semester. Study and implementation of skills necessary for planning, guiding, and interacting with young children and their families; and for the management of facilities that provide services for young children. One lecture hour and at least twenty laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade point average of at least 2.00; the following coursework with a grade of at least C- in each course: Human Development and Family Sciences 304, 313, 113L, and 315L, Mathematics 408C or 408N, Psychology 301, and Statistics and Scientific Computation 302; Human Development and Family Sciences 312, 338, 340, and 366; three additional semester hours of upper-division coursework in human development and family sciences; six semester hours of coursework from the list of approved supporting courses available from the School of Human Ecology; and consent of instructor. Admission by application only, filed with the Department of Human Development and Family Sciences by May 1 for enrollment in the following spring semester, or by December 1 for enrollment in the following fall semester.

#### **HDF 354. Advanced Personal Financial Planning.**

Overview from the individual and family perspectives of financial planning and decision-making with regard to home ownership, tax planning, investment alternatives, retirement planning, and estate transfer. Includes application of knowledge to hypothetical situations and case studies. Three lecture hours a week for one semester. Prerequisite: Human Development and Family Sciences 322 with a grade of at least C-.

#### **HDF 355. Problems Course: Research Practicum.**

Intensive study of selected problems of a transdisciplinary nature. One lecture hour and nine research hours a week for one semester. May be repeated for credit. Offered on the letter-grade basis only.

Prerequisite: Upper-division standing; a University grade point average of at least 2.00; the following coursework with a grade of at least C- in each course: Human Development and Family Sciences 304, 313, 113L, and 315L, Mathematics 408C or 408N, Psychology 301, and Statistics and Scientific Computation 302; and consent of instructor. Admission by application only, filed with the Department of Human Development and Family Sciences by May 1 for enrollment in the following spring semester, or by December 1 for enrollment in the following fall semester; or consent of instructor. For nonmajors, the application process and prerequisites may be waived by consent of instructor.

**Topic 1: Research in Human Development and Family Sciences.** Offered on the letter-grade basis only.

#### **HDF 355H. Problems Course: Honors.**

Intensive study of selected research problems. One lecture hour and nine research hours a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; a University grade-point average of at least 3.00; Human Development and Family Sciences 315L with a grade of at least B-; Mathematics 316, Statistics and Scientific Computation 303, 304, 305, or 306 with a grade of at least B-; and consent of the department.

#### **HDF 356. The Development and Deterioration of Relationships.**

Studies the formation and development of marital relationships and the changes in these relationships. Explores courtship, the early years of marriage, the impact of parenthood on relationships, divorce, and remarriage. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and the following courses with a grade of at least C- in each: Human Development and Family Sciences 304 or 304H, and 315L and 337.

#### **HDF 358. Parent-Child Relationships.**

The determinants of parenting attitudes and behavior and the effects on children of variations in sensitivity, discipline, and other aspects of parenting. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.

#### **HDF 360. Methods of Family Life Education.**

An examination, integrating theory and applied knowledge, of the best practices for working with families. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Human Development and Family Sciences 304 and 315L with a grade of at least C- in each.

#### **HDF 362. Children and Public Policy.**

The positive and negative effects of policy on children and the policy landscape in several major domains of child and family life in the United States and in other countries. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in human development and family sciences, anthropology, education, psychology, sociology, or social work.

#### **HDF 366. Guidance in Adult-Child Relationships.**

Same as Women's and Gender Studies 345 (Topic 4: Guidance in Adult-Child Relationships). Theory and implementation of positive child and adult interactions, communication, and guidance strategies. Two lecture hours a week for one semester, and four laboratory hours a week to be arranged as a four-hour block between 8:30 AM and 4:45

PM, Monday through Thursday. Prerequisite: Human Development and Family Sciences 313 and 113L, and three semester hours of upper-division coursework in human development and family sciences, education, psychology, or sociology.

#### **HDF 371. Adolescent Development in Context.**

The biological, cognitive, and social changes that occur during the second decade of life, including the developmental issues faced by adolescents. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each.

#### **HDF 372K. Families in Transition.**

Analysis of interaction, transitions, and crises over the family life span. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and the following courses with a grade of at least C- in each: Human Development and Family Sciences 304 or 304H, and 315L and 337.

#### **HDF 375. Economic Issues of the Family.**

Economic issues experienced by families through the various stages of the life span. Three lecture hours a week for one semester. Prerequisite: Human Development and Family Sciences 304, and 312 or 322.

#### **HDF 378K. Advanced Child and Family Development.**

Concepts, theories, and issues in human development and family sciences. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Six semester hours of upper-division coursework in human development and family sciences (or child development), anthropology, education, psychology, sociology, or social work, and consent of instructor.

**Topic 5: Media and the Family.**

**Topic 6: Introduction to Early Childhood Intervention.**

**Topic 8: Advanced Early Childhood Intervention.** Additional prerequisite: Human Development and Family Sciences 378K (Topic 6).

#### **HDF 378L. Theories of Child and Family Development.**

Study and analysis of major theories in human and family development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; Human Development and Family Sciences 313, 113L, and 315L with a grade of at least C- in each; and three additional semester hours of upper-division coursework in human development and family sciences with a grade of at least C- in each course.

#### **HDF 379H. Honors Tutorial Course.**

Supervised individual research on a special topic in human development and family sciences; oral presentation and preparation of a scholarly paper covering the research. May be based on laboratory, library, or field research. Conference course. May be repeated once for credit. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, admission to the human development and family sciences honors program, and consent of the honors adviser. Name of honors adviser and application procedure are available in the division office.

## **Human Ecology: H E**

### **Lower-Division Courses**

#### **H E 115H. Freshman Honors Seminar.**

Research presentations by students, faculty, and invited scientists on current issues in human ecology, human development and family sciences, and nutrition. One lecture hour a week for one semester. Prerequisite: Admission to the honors degree option in human development and family sciences or nutrition; three semester hours of honors-designated coursework in chemistry, biology, or mathematics with a grade of at least B-; and Human Development and Family Sciences 313 and 113L, or Nutrition 312 and 112L (or 311 and 111L), with a grade of at least B- in each course.

### **Upper-Division Courses**

#### **H E 225H. Sophomore Honors Seminar.**

Students plan, conduct, write, and present research on a current topic in human ecology. Two lecture hours a week for one semester. Prerequisite: Six semester hours of honors-designated coursework in chemistry, biology, or mathematics; concurrent enrollment in a course chosen from a list maintained in the departmental office; and consent of instructor and the departmental honors adviser.

#### **H E 355. Problems Course.**

Intensive study of selected problems of a transdisciplinary nature. The equivalent of three lecture hours a week for one semester. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Research in Family Economics.**

## **Nutrition: NTR**

### **Lower-Division Courses**

#### **NTR 306 (TCCN: BIOL 1322, HECO 1322). Fundamentals of Nutrition.**

Essential food components and their functions in life processes. Three lecture hours a week for one semester. Only one of the following may be counted: Nutrition 306, 311, 312, 312H. Nutrition 306 may not be counted toward a nutritional sciences degree.

#### **NTR 307. Introductory Food Science.**

Application of the principles of food chemistry to processing and preparation techniques. Three lecture hours a week for one semester. Prerequisite: Nutrition 312 (or 311) or 312H with a grade of at least C-, and credit or registration for Nutrition 107L.

#### **NTR 107L. Introductory Food Science Laboratory.**

Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 307.

#### **NTR 312. Introduction to Nutritional Sciences.**

Designed for science majors. Biochemical, physiological, and cellular functions of energy macronutrients, vitamins and minerals, and the scientific basis for current dietary and nutrient recommendations. Three lecture hours a week for one semester. Only one of the following may be counted: Nutrition 306, 311, 312, 312H. Prerequisite: Chemistry 301 with a grade of at least C-; Mathematics 408C, 408K, or

408N with a grade of at least C-; and credit or registration for Biology 311C and Chemistry 302.

#### **NTR 312H. Introduction to Nutritional Sciences: Honors.**

Restricted to honors eligible majors in nutritional sciences, biology, biochemistry, and students in the Dean's Scholars Honors Program. Biochemical, molecular, and cellular functions of nutrients with emphasis on primary scientific literature and current methodology. Three lecture hours a week for one semester. Only one of the following may be counted: Nutrition 306, 311, 312, 312H. Prerequisite: The following coursework with a grade of at least C- in each: Chemistry 301 or 301H; and Mathematics 408C or 408n, or the equivalent; and credit or registration for Biology 311C or 315H, and Chemistry 302 or 302H.

#### **NTR 112L. Introduction to Nutritional Science Laboratory.**

Collection and evaluation of dietary intake data, nutrient composition of food, and survey of dietetic practice. Three laboratory hours a week for one semester. Nutrition 111L and 112L may not both be counted. Prerequisite: Credit or registration for Nutrition 312 (or credit for Nutrition 311).

#### **NTR 312R. Research in Nutritional Sciences.**

Restricted to honors eligible majors in nutritional sciences, biology, biochemistry, and students in the Dean's Scholars Honors Program. Introduction to biochemical and molecular biological techniques, enzyme and coenzyme assays, dietary analysis and assessment protocols, and statistical methods in nutritional sciences. Preparation of a scholarly paper and oral presentation of research findings. One lecture hour and six laboratory hours a week for one semester. Nutrition 112L and 312R may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each: Chemistry 301 or 301H; and Mathematics 408C or 408N, or the equivalent; and credit or registration for Biology 311C or 315H, Chemistry 302 or 302H, and Nutrition 312H.

#### **NTR 315. Nutrition through the Life Cycle.**

Adapting nutrition recommendations to physiological changes throughout the life span. Three lecture hours a week for one semester. Prerequisite: Nutrition 306 (or 311), 312, or 312H with a grade of at least C-.

#### **NTR 316. Culture and Food.**

Influence of culture on foodways around the world. Three lecture hours a week for one semester. Prerequisite: Nutrition 306 (or 311), 312, or 312H with a grade of at least C-.

#### **NTR 218. Assessment of Nutritional Status.**

Assessment of nutritional status using anthropometric, biochemical, clinical, and dietary intake data, and development and implementation of effective care for individuals. Two lecture hours a week for one semester. Nutrition 218, 318 and 170L may not both be counted. Prerequisite: Nutrition (311 and 111L), 312 and 112L, or 312H and 312R with a grade of at least C- in each; and credit or registration for Nutrition 118L.

#### **NTR 118L. Assessment of Nutritional Status Laboratory.**

Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 218.

#### **NTR 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Nutrition.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study

Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **Upper-Division Courses**

#### **NTR 321. International Nutrition: The Developing World.**

Nutrition-related issues in the developing world, including nutrient deficiency and disease, concerns in vulnerable populations (pregnancy, infancy, childhood, and old age), and food aid. Three lecture hours a week for one semester. Nutrition 321 and 360 (Topic 2: International Nutrition) may not both be counted. Prerequisite: Nutrition 306 (or 311), 312, or 312H with a grade of at least C-.

#### **NTR 324. Advanced Food Science.**

Application of the principles of food chemistry to the development of food products. Three lecture hours a week for one semester. Offered in the spring semester only. Prerequisite: Chemistry 320M, Nutrition 307, 107L, and 326 with a grade of at least C- in each; and credit or registration for Nutrition 124L.

#### **NTR 124L. Advanced Food Science Laboratory.**

Individual research project on food product development and evaluation. Three laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Credit or registration for Nutrition 324.

#### **NTR 326. Cellular and Molecular Nutrition.**

Integration of nutrition, genetics, cell biology, and molecular biology. Focuses on the cellular and molecular basis of nutrition-related diseases and nutrient-gene interactions. Three lecture hours and one discussion hour a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Biology 311C, and Nutrition 312 (or 311) or 312H; and credit or registration for Chemistry 320M, and Nutrition 112L or 312R.

#### **NTR 126L. Nutritional Sciences Laboratory.**

Basic laboratory techniques in nutritional sciences. Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 326.

#### **NTR 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Nutrition.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

#### **NTR 330. Nutrition Education and Counseling.**

Application of counseling and learning theories to the care of individuals and groups in community and clinical settings. Three lecture hours and one additional class hour a week for one semester. Prerequisite: Nutrition 315 and 326 with a grade of at least C- in each.

#### **NTR 331. International Nutrition: Social and Environmental Policies.**

Explores the nutritional concerns of different countries, environmental aspects of food supply, and social policies needed to balance

supply with demand in a sustainable manner. Three lecture hours a week for one semester. Nutrition 331 and 360 (Topic: International Nutrition: Social and Environmental Policies) may not both be counted. Prerequisite: Upper-division standing, and Nutrition 306 (or 311), 312, or 312H with a grade of at least C-.

### **NTR 332. Community Nutrition.**

National and international issues in public health and nutrition programs. Three lecture hours a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Nutrition 312 (or 311) or 312H; 315; and 326.

### **NTR 334. Foodservice Systems Management.**

Procurement, production, and service delivery in foodservice systems. Three lecture hours a week for one semester. Prerequisite: Nutrition 307, 107L, and 326 with a grade of at least C- in each, and credit or registration for Nutrition 234L.

### **NTR 234L. Laboratory in Foodservice Systems.**

Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Nutrition 334.

### **NTR 338H. Issues in Nutrition and Health: Honors.**

Restricted to honors eligible majors in nutritional sciences, biology, biochemistry, and students in the Dean's Scholars Honors Program. Identifying, reading, analyzing, writing, and presenting scientific research on selected topics in nutrition and human health. Detailed literature review as preparation for an honors research thesis. Three lecture hours and one discussion hour a week for one semester. Nutrition 338H and 338W may not both be counted. Prerequisite: Biology 325 or 325H; Nutrition 312H and 312R; Statistics and Scientific Computation 302, 303, 304, 305, or 325H; and credit or registration for Biology 365S, and Chemistry 369, or 339K and 339L.

### **NTR 338W. Issues in Nutrition and Health.**

Identifying, reading, analyzing, writing, and presenting scientific research on selected topics in nutrition and human health. Three lecture hours and one discussion hour a week for one semester. Nutrition 338W and 338H may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Biology 325 and 365S (or 416L); Chemistry 369, or 339K and 339L; Nutrition 326; and Statistics and Scientific Computation 303, 304, or 305.

### **NTR 342. Advanced Nutritional Sciences.**

Biochemical and molecular biological aspects of carbohydrate, fat, and amino acid metabolism. Three lecture hours and one discussion hour a week for one semester. Prerequisite: The following coursework with a grade of at least C- in each course: Biology 325 and 365S (or 416L), Chemistry 369, or 339K and 339L, and Nutrition 326.

### **NTR 144M. Advanced Nutrition II Laboratory.**

Advanced laboratory techniques in nutrition assessment and research. Three laboratory hours a week for one semester. Offered in the spring semester only. Prerequisite: Concurrent enrollment in Nutrition 344 or consent of instructor.

### **NTR 245C. Clinical Practice in Medical Nutrition Therapy I.**

Application of principles of medical nutrition therapy to the care of clients in the practice setting. Nine hours of supervised practice a week for one semester. Prerequisite: Nutrition 370 with a grade of at

least C-, credit or registration for Nutrition 371, and admission to the Coordinated Program in Dietetics.

### **NTR 345M. Clinical Practice in Medical Nutrition Therapy II.**

Application of principles of medical nutrition therapy to the care of patients in health care facilities. Forty hours of supervised practice a week for four weeks. Prerequisite: Nutrition 245C and 371 with a grade of at least C- in each. Students must register for Nutrition 372C in the same semester.

### **NTR 152, 252, 352. Field Experience in Nutrition.**

For each semester hour of credit earned, three field placement hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Approval of application for field experience. Applications are available in the department office.

### **NTR 353. Field Experience in International Nutrition.**

Supervised study abroad experience designed to help students understand nutrition science issues, applications, related health care practices in a global environment, and other cultures. Students work in schools, hospitals, or similar settings to gain professional experience with food science and dietetics. Five lecture hours and ten field hours a week for five weeks. Prerequisite: Nutrition 306 (or 311), 312, or 312H with a grade of at least C-; and approval of an application to study abroad.

### **NTR 155, 255, 355, 455. Undergraduate Research in Nutrition.**

Supervised individual undergraduate research in nutrition. For each semester hour of credit earned, at least three laboratory hours a week for one semester. May be repeated for credit, but no more than four semester hours may be counted toward a degree in nutrition. Any additional hours must be taken on the pass/fail basis. Nutrition 355 and 355H may not both be counted. Prerequisite: Consent of instructor.

### **NTR 355H. Honors Research.**

Restricted to honors eligible majors in nutritional sciences, biology, biochemistry, and students in the Dean's Scholars Honors Program. Research in biological, biochemical, or nutritional science, coordinated with readings of scientific literature, and a written research report for each semester in which credit is sought. Nutrition 355 and 355H may not both be counted. May be repeated for credit, but no more than nine semester hours may be counted toward the major in nutrition. Any additional hours must be taken on the pass/fail basis. Prerequisite: Biology 325 or 325H; Nutrition 312H and 312R; and approval of research supervisor.

### **NTR 355M. Advanced Food Systems Management.**

Financial control, quality assurance, personnel administration, foodservice equipment, layout and design in foodservice operations. Analysis and evaluation of an organized foodservice operation. Three lecture hours and four hours of supervised practice a week for one semester. Prerequisite: Accounting 310F or 311, and Nutrition 334 and 234L, with a grade of at least C- in each.

### **NTR 360. Selected Topics in Applied Nutrition.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.



### **NTR 162. Standards, Ethics, and Credentialing for Dietetic Practice.**

Identification of standards and discussion of current issues in ethics and credentialing for dietetics practice. One lecture hour a week for one semester. Prerequisite: Credit or registration for Nutrition 218 and 118L (or credit for Nutrition 318).

### **NTR 365. Selected Topics in Nutritional Sciences.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Vitamins and Minerals.** Biomedical, cellular and molecular, and clinical aspects of vitamins, minerals, and water. Nutrition 344 and 365 (Topic 1) may not both be counted. Prerequisite: Biology 325, 365S (or 416L), and Nutrition 342, with a grade of at least C- in each.

**Topic 2: Nutrition and Genes.** Interactions between nutrients and gene expression, including heredity, gene regulation, metabolic disease, developmental abnormalities, and molecular techniques. Prerequisite: Biology 325, 365S (or 416L), and Nutrition 342, with a grade of at least C- in each.

**Topic 3: Epidemiological and Statistical Methods in Nutrition.** Basic principles and concepts of epidemiology and statistics in nutritional sciences. Prerequisite: Nutrition 342 with a grade of at least C-.

### **NTR 366L. Research Methods in Nutritional Sciences.**

Focuses on state-of-the-art research in nutrition, including biochemistry and molecular biological techniques for nutrient-gene interactions, enzyme and coenzyme functions, and nutrient analysis of biologic materials. Includes data analysis and statistical methods. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Nutrition 126L with a grade of at least C-.

### **NTR 167. Undergraduate Seminar in Nutritional Sciences.**

One lecture hour a week for one semester. Prerequisite: Upper-division standing.

### **NTR 370. Medical Nutrition Therapy I.**

The role of nutrition in prevention and treatment of chronic disease such as diabetes and heart disease. Three lecture hours a week for one semester. Nutrition 668A and 370 may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Nutrition 326, Biology 325 or Nutrition 218 (or 318) and 118L; and credit with a grade of at least C- or registration for Biology 365S (or credit for 416L) and Chemistry 369.

### **NTR 371. Medical Nutrition Therapy II.**

Nutritional care of critically ill patients, including techniques of nutrition support. Three lecture hours a week for one semester. Nutrition 668B and 371 may not both be counted. Prerequisite: The following coursework with a grade of at least C- in each course: Nutrition 326, Biology 325 or Nutrition 218 (or 318) and 118L; and credit with a grade of at least C- or registration for Biology 365S (or credit for 416L) and Chemistry 369.

### **NTR 372C. Practicum in Clinical Dietetics.**

Supervised practice in health care facilities. Forty hours of supervised practice a week for four weeks. Prerequisite: Admission to the Coordinated Program in Dietetics. Students must register for Nutrition 345M in the same semester.

### **NTR 372F. Practicum in Food Services Systems Management.**

Supervised practice in food service facilities. Forty hours of supervised practice a week for four weeks. Prerequisite: Nutrition 245C and 355M with a grade of at least C- in each, and admission to the Coordinated Program in Dietetics. Students must register for Nutrition 373S in the same semester.

### **NTR 373S. Practicum in Dietetic Administration.**

Supervised practice in the administration of food and nutrition programs. Forty hours of supervised practice a week for three weeks. Nutrition 355L and 373S may not both be counted. Prerequisite: Admission to the Coordinated Program in Dietetics. Students must register for Nutrition 372F in the same semester.

### **NTR 374C. Practicum in Community Dietetics.**

Supervised practice in one or more community-based nutrition programs. Forty hours of supervised practice a week for five weeks. Nutrition 352C and 274C may not both be counted. Prerequisite: Nutrition 345M, 372C, 372F, and 373S with a grade of at least C- in each; and admission to the Coordinated Program in Dietetics.

### **NTR 374P. Advanced Practicum in Dietetics.**

Culminating experience in the practice of administrative, clinical, or community dietetics. Forty hours of supervised practice a week for five weeks. Prerequisite: Nutrition 345M, 372C, 372F, and 373S with a grade of at least C- in each; and admission to the Coordinated Program in Dietetics.

### **NTR 379H. Honors Tutorial Course.**

Supervised individual research on a special topic in nutrition; oral presentation and preparation of a scholarly paper covering the research. May be based on laboratory, library, or field research. Conference course. May be repeated once for credit. Prerequisite: Consent of the student's research supervisor and the departmental honors adviser.

## **Textiles and Apparel: TXA**

### **Lower-Division Courses**

#### **TXA 103, 203, 303. Topics in Textiles and Apparel.**

For each semester hour of credit earned, the equivalent of one hour a week for one semester. May be repeated for credit when the topics vary.

#### **TXA 205. Textiles.**

Chemical and physical properties of fibers and yarns, fabric construction, and finishes. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 105L.

#### **TXA 105L. Textiles Laboratory.**

Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 205.

#### **TXA 212K. Apparel Industry.**

Introduction to the integrated apparel design industry from the creative and merchandising perspective. Two lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Textiles and Apparel 212L; and the following coursework with a

grade of at least C- in each course: Textiles and Apparel 316L or 316Q; and 319, or 219C and 119L.

### **TXA 212L. Apparel Product Development and Design Laboratory.**

Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 212K.

### **TXA 315K. Field Experience I.**

Application of merchandising strategic planning in a professional environment with faculty and site director supervision. At least 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Retail Merchandising Internship Program.

### **TXA 316L. Apparel I.**

Industrial techniques of pattern design and garment construction. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Textiles and Apparel 319, or 219C and 119L.

### **TXA 316Q. Sewn Products Analysis.**

Evaluation of soft goods, including materials, quality of work, and costs. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each.

### **TXA 319. Visual Merchandising and Display Techniques.**

Techniques of merchandise presentation, including principles and practice in display planning, execution, and coordination. Three lecture hours a week for one semester. Students with credit for Textiles and Apparel 319 may not earn credit for Textiles and Apparel 219C or 119L. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each.

### **TXA 219C. Applied Art in Visual Presentation.**

Introduction to the principles and elements of design as related to merchandising presentation, display planning, execution, and coordination. Two lecture hours a week for one semester. Students with credit for Textiles and Apparel 319 may not earn credit for Textiles and Apparel 219C or 119L.

### **TXA 119L. Applied Art in Visual Presentation Laboratory.**

Application of the principles and elements of design as related to merchandise presentation, display planning, execution, and coordination. Three laboratory hours a week for one semester. Students with credit for Textiles and Apparel 319 may not earn credit for Textiles and Apparel 119L. Prerequisite: Credit with a grade of at least C- or registration for Textiles and Apparel 219C.

### **TXA 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Textiles and Apparel.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **TXA 325K. Culture, Gender, and Appearance.**

Social, economic, aesthetic, and political aspects of historic costume and of the evolution of modern dress. Three lecture hours a week for

one semester. Prerequisite: Textiles and Apparel 319 with a grade of at least C-, or Art History 301.

### **TXA 325L. History of Dress and Cultural Change I.**

Social, economic, aesthetic, and political aspects of costume evolution from ancient times through the Renaissance. Three lecture hours a week for one semester. Textiles and Apparel 325K and 325L may not both be counted. Prerequisite: Upper-division standing.

### **TXA 325M. History of Dress and Cultural Change II.**

Social, economic, aesthetic, and political aspects of costume evolution from the Baroque period through modern times. Three lecture hours a week for one semester. Textiles and Apparel 325K and 325M may not both be counted. Prerequisite: Upper-division standing.

### **TXA 126. Apparel II.**

Advanced apparel construction techniques using industry standards and portfolio development. One lecture hour a week for one semester. Prerequisite: Textiles and Apparel 316L with a grade of at least C- and credit or registration for Textiles and Apparel 226L.

### **TXA 226L. Apparel II Laboratory.**

Advanced apparel construction techniques using industry standards and portfolio development. Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 126.

### **TXA 327. Clothing and Human Behavior.**

The social, psychological, and nonverbal significance of clothing and the influence of clothing on behavior. Three lecture hours a week for one semester. Prerequisite: Six semester hours of coursework in psychology, sociology, or the School of Human Ecology.

### **TXA 328. Research Methods in Textiles and Apparel.**

Basic research methodology and academic writing. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, completion of an introductory statistics course, and Textiles and Apparel 205 and 105L with a grade of at least C- in each.

### **TXA 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Textiles and Apparel.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Human Ecology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **TXA 352C. Field Experience in Textile Conservation.**

Application of textile conservation, museum management, and exhibition techniques in a professional environment. A minimum of 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Conservation Certificate Program or to Textiles and Apparel, Option I with a conservation concentration, or consent of the instructor.

### **TXA 352D. Field Experience in Apparel Design.**

Application of apparel design techniques and principles in a professional environment. At least 154 hours of fieldwork for one semester. Prerequisite: Admission to the Apparel Design Internship

Program, and Textiles and Apparel 164K (Topic 1: Flat Pattern) and 264L (Topic 1: Flat Pattern) with a grade of at least C- in each.

#### **TXA 352M. Field Experience in Retail Merchandising.**

Application of merchandising techniques and principles in a professional environment. At least 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Retail Merchandising Internship Program.

#### **TXA 155, 355. Problems Course.**

Intensive study of selected problems of an interdisciplinary nature. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Consent of instructor.

#### **TXA 355C. Computer-Aided Design for Apparel.**

Computer technology used to create textile prints, weaves, illustrations, flat patterns, promotional pieces, and pattern markers. One lecture hour and six laboratory hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each; and credit with a grade of at least C- or registration for Textiles and Apparel 164K (Topic 1: Flat Pattern) and 264L (Topic 1: Flat Pattern).

#### **TXA 355D. Textiles Artifact Management and Conservation.**

Principles and techniques in the identification, documentation, conservation, and exhibition of textile-based artifacts. Six laboratory hours a week for one semester. Prerequisite: Textiles and Apparel 325M.

#### **TXA 355K. Textile and Apparel Economics.**

Economic and regulatory aspects of the textile and apparel industries. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L with a grade of at least C- in each, and Economics 304K and 304L with a grade of at least C- in each.

#### **TXA 355N. History of Textiles.**

Role of textiles in the social, economic, aesthetic, and technological development of society; including production and design of textiles throughout history. Three lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L and three semester hours of coursework in art history, with a grade of at least C- in each course.

#### **TXA 355P. Problems in Retail Merchandising.**

Intensive study of selected problems related to field experience; development of analytical and problem-solving skills for retailing. At least 154 hours of supervised fieldwork for one semester. Prerequisite: Admission to the Retail Merchandising Internship Program.

#### **TXA 359H. Honors Reading Course.**

Supervised individual reading on special subjects. Conference course. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, and consent of the undergraduate adviser.

#### **TXA 260L. Advanced Textiles.**

Composition, structure, and properties of textile products; contributions of textile research. Two lecture hours a week for one semester. Prerequisite: Textiles and Apparel 205 and 105L; Chemistry 301, 302,

and 204; six semester hours of upper-division coursework in textiles and apparel with a grade of at least C- in each course; and credit with a grade of at least C- or registration for Textiles and Apparel 260M.

#### **TXA 260M. Advanced Textiles Laboratory.**

Analysis and evaluation of textile performance. Six laboratory hours a week for one semester. Prerequisite: Credit or registration for Textiles and Apparel 260L.

#### **TXA 361. Consumer Behavior in the Marketplace.**

Internal and external factors that influence consumer behavior in the marketplace. Application of concepts and theories from the social sciences to the areas of textiles, clothing, and appearance; experience in conducting market and consumer research. Three lecture hours a week for one semester. Human Ecology 361 and Textiles and Apparel 361 may not both be counted. Prerequisite: Upper-division standing and three semester hours of coursework in economics.

#### **TXA 164K. Advanced Problems in Clothing.**

Creative application of flat pattern or draping processes. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Textiles and Apparel 212K, 212L, 316L, 126, and 226L, with a grade of at least C- in each; and credit with a grade of at least C- or registration for the same topic of Textiles and Apparel 264L.

**Topic 1: Flat Pattern.**

**Topic 2: Draping.**

**Topic 3: Advanced Apparel Design.**

#### **TXA 264L. Advanced Problems in Apparel Laboratory.**

Six laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Credit with a grade of at least C- or registration for the same topic of Textiles and Apparel 164K.

**Topic 1: Flat Pattern.**

**Topic 2: Draping.**

**Topic 3: Advanced Apparel Design.**

#### **TXA 165, 265, 365. Advanced Topics in Textiles and Apparel.**

For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites vary with the topic.

#### **TXA 376. Principles of Retail Merchandising.**

Retail strategic planning and implementation for soft goods and apparel. Three lecture hours a week for one semester. Prerequisite: Marketing 320F and six semester hours of upper-division coursework in textiles and apparel, business, studio art, or journalism.

#### **TXA 378H. Honors Seminar in Textiles and Apparel.**

The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, a University grade point average of at least 3.00, and consent of the honors adviser.

#### **TXA 379H. Honors Tutorial Course.**

Supervised individual research on a special topic in textiles and apparel; oral presentation and preparation of a scholarly paper covering the research. May be based on laboratory, library, or field research. Conference course. May be repeated once for credit.

Prerequisite: Upper-division standing, admission to the Textiles and Apparel Honors Program, Textiles and Apparel 359H with a grade of at least B-, and consent of the honors adviser.

## Department of Marine Science

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### Marine Science: MNS

#### Lower-Division Courses

##### **MNS 307 (TCCN: GEOL 1345). Introduction to Oceanography.**

Same as Geological Sciences 307. Introduction to the sciences of oceanography: geological, physical, and biological. Two lecture hours and two laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts degree with a major in geological sciences, the Bachelor of Science in Geological Sciences (Option I), the Bachelor of Science in Geological Sciences (Option II), or the Bachelor of Science in Geological Sciences (Option III).

##### **MNS 308. Humans and a Changing Ocean.**

The consequences of human-induced alteration of the marine environment including the impact on fisheries, marine mammals, food-web changes, and changes in species composition and ecological function. Designed for non-science majors. Three lecture hours a week for one semester. Marine Sciences 309 (Topic: Humans and a Changing Ocean) and 308 may not both be counted. Prerequisite: Marine Sciences 307 or consent of instructor.

##### **MNS 309. Topics in Marine Science.**

Designed for nonscience majors. Selected topics in marine science, including marine biology, marine chemistry, and physical oceanography. Two lecture hours and one and one-half laboratory hours a week for one semester. May not be counted toward a degree in marine science. May be repeated for credit when the topics vary. Prerequisite: Marine Sciences 307.

#### Upper-Division Courses

##### **MNS 320. Marine Ecology.**

Study of ecological processes at different levels of integration in marine ecosystems. Three lecture hours a week for one semester. Prerequisite: Biology 311D, and Chemistry 302 or 302H.

##### **MNS 120L. Laboratory Studies in Marine Ecology.**

A laboratory course with two weekend field trips to the Marine Science Institute at Port Aransas to perform ecological studies in the Texas coastal zone. Two weekend field trips, with pre- and post-field trip laboratory hours required. Prerequisite: Credit or registration for Marine Sciences 320.

##### **MNS 440. Limnology and Oceanography.**

Same as Biology 456L. An introduction to the study of the interactions between aquatic organisms and their environments. Two lecture hours and six laboratory hours a week for one semester. Prerequisite:

Biology 325 or 325H with a grade of at least C-, and Chemistry 302 or 302H.

##### **MNS 344K. Marine Mining and Minerals.**

Same as Geological Sciences 344K. Overview of seafloor mineral deposits, their exploration and mining. Three lecture hours a week for one semester. May not be counted toward the Bachelor of Science in Geological Sciences degree. Prerequisite: Geological Sciences 401 or 303, 416K, and 416M.

##### **MNS 148, 348. Training Cruise(s).**

May be repeated for credit when the topics vary.

###### **Topic 1: Training Cruise(s): Research in Biological**

**Oceanography.** Same as Biology 148, 348. One or more cruises of one to several days each to collect physical, chemical, oceanographic, and biological data relevant to biological processes in the sea. Preparatory instruction and postcruise sample processing and analysis. Prerequisite: Biology 325 and Chemistry 302 with a grade of at least C- in each, and consent of instructor.

**Topic 2: Marine Geology and Geophysics Field Course.** Marine Science 348 (Topic 2) is same as Geological Sciences 348K.

Hands-on, team-based instruction in the collection and processing of marine geological and geophysical data along the Gulf of Mexico coast. Includes classroom, laboratory, and field components in Austin and at sea. Offered between the spring semester and the summer session; limited class meetings may begin in the spring semester. Geological Sciences 397F and Marine Science 348 (Topic 2) may not both be counted. Fulfills the field experience requirement for some geological sciences degree programs.

Students should contact the Department of Geological Sciences before registering. Prerequisite: For geological sciences majors, Geological Sciences 420K or 320L with a grade of at least C-, and consent of instructor; Geological Sciences 416M and 465K are recommended; for others, Marine Science 307 and 354F with a grade of at least C- in each, and consent of instructor.

##### **MNS 352. Principles of Marine Science.**

Lectures, laboratory, and fieldwork. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 9: Endocrinology.** Endocrinology, with special reference to lower vertebrates and evolution of control systems. Marine Science 352 (Topic 9) and 382 (Topic 9: Endocrinology) may not both be counted. May count as zoology. Prerequisite: Previous courses in physiology and consent of instructor.

**Topic 12: Adaptive Physiology of Marine Organisms.** Selected topics in the comparative physiology of marine organisms and their environmental adaptations. Prerequisite: Previous course in cell physiology or consent of instructor.

**Topic 13: Microclimatology.** Physical and thermal characteristics of the atmospheric surface layer, with particular reference to coastal environments.

**Topic 16: Ocean Engineering.** Description of ocean waves and tides, methods of wave forecasting, classroom and field exercises. Prerequisite: Consent of instructor.

**Topic 18: Marine Atmospheric Chemistry.** Atmospheric particle chemistry; sea-surface films, atmospheric organic matter; air-sea chemical fractionation; carbon, nitrogen, sulfur cycles. Prerequisite: Consent of instructor.

**Topic 20: General Marine Phycology.** Survey of benthic algae and phytoplankton of the Texas coast; systematics, morphology, life history and culturing techniques.



**Topic 21: Ecology of Marine Fungi.** Biology of the fungi with emphasis on ecological, morphological, and developmental aspects and culturing techniques.

**Topic 22: Oceanography.** Consideration of current understanding of the chemistry and biology of the oceans.

### **MNS 352C. Estuarine Ecology.**

General ecological principles of estuarine environments in Texas, including physiography, hydrography, and plant and animal community structure and productivity. Requires several field trips in addition to lecture hours, including one weekend trip. Marine Sciences 352 (Topic 8: Estuarine Ecology) and 352C may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and six semester hours of coursework in biology, chemistry, geological sciences, or physics.

### **MNS 352D. Marine Botany.**

Exploration of the marine algae and seagrasses of the south Texas coast, with emphasis on their taxonomy, physiology, and ecology; field trips to representative coastal habitats. Requires several field trips in addition to lecture hours, including one weekend trip. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; one of the following courses: Biology 322, 324, 325 or 325H, 328, Marine Sciences 352C; and three additional semester hours of coursework in biology.

### **MNS 152L, 252L. Principles of Marine Science: Laboratory Studies.**

A laboratory course with one-day field trips (which may include weekends) to local estuarine and coastal habitats. Includes pre- and post-field trip laboratory hours. For each semester hour of credit earned, three or four field/laboratory sessions, scheduled throughout the semester. May be counted toward the Bachelor of Science in Biology (Option III: Marine and Freshwater Biology) and toward other undergraduate degrees in biology. May be repeated for credit when the topics vary. Prerequisite: Credit or registration for Marine Sciences 352.

### **MNS 152S, 252S. Principles of Marine Science: Undergraduate Seminar.**

Guest lectures by local and visiting research scientists on a variety of topics in marine and environmental science. Each seminar is followed by a separate one-hour discussion to give students an opportunity to meet directly with the scientist. For each semester hour of credit earned, one lecture/discussion a week for one semester. May be counted toward the Bachelor of Science in Biology (Option III: Marine and Freshwater Biology) and toward other undergraduate degrees in biology. May be repeated for credit when the topics vary.

### **MNS 152T, 252T. Principles of Marine Science: Special Topics.**

Advanced research topics in marine science relevant to critical habitats, organisms, or processes. A field oriented course with weekend field trips on the Texas coast, including pre- and post-field trip laboratory hours. For each semester hour of credit earned, two weekend field trips, scheduled throughout the semester. May be counted toward the Bachelor of Science in Biology (Option III: Marine and Freshwater Biology) and toward other undergraduate degrees in biology. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and six semester hours of coursework in biology, chemistry, geological sciences, and/or physics.

### **MNS 353. Topics in Marine Science.**

Two lecture hours and one laboratory hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**Topic 2: Fish Adaptations to Coastal Ecosystems.** Quantitative ecological comparisons of zoogeographical abundance and distribution with population, metabolic, and growth parameters. Additional prerequisite: Fifteen semester hours of coursework in biology and/or zoology.

**Topic 4: Current Research.** Research instruction/participation in marine science. Laboratory and field activity with emphasis on faculty contact.

**Topic 5: Seafloor Mining.** Study of seafloor mineral resources, including problems and policies related to exploration, mining, environmental concerns, assessment, and industrial development.

**Topic 6: Marine Ecology.** Independent study in marine ecology, literature research, and comprehensive writing. Report required. Additional prerequisite: Upper-division standing in a natural science, engineering, or education.

**Topic 7: Marine Sedimentology.** Selected topics and problems concerning the depositional processes, controls, and distribution of marine sediments.

**Topic 8: Marine Chemistry.** Study of the processes controlling the chemistry of natural waters, the oceans as a chemical system, and the impact of human activities on these systems.

**Topic 14: Marine Isotope Geochemistry.** The use of isotopes (stable, radiogenic, uranium series, and anthropogenic) in the study of marine science.

**Topic 15: Interdisciplinary Classroom Field Methods.** Uses the interdisciplinary nature of marine science to focus on inquiry-based instruction, constructivist-oriented teaching strategies, and field explorations.

**Topic 17: Marine Fish Physiology.** Physiology of major organ systems of marine fishes, with emphasis on adaptations to marine environments. Includes osmoregulation, nutrition, circulation, excretion, reproduction, sensory physiology, and endocrine control. Additional prerequisite: Biology 311D, and Chemistry 302 or 302H.

### **MNS 354. Marine Invertebrates.**

Study of invertebrate taxonomy, structure, behavior, and ecology, with emphasis on field sampling and laboratory studies of invertebrate habitats of the Texas coast. Three lecture hours a week for one semester. Prerequisite: Six semester hours of biology or consent of instructor.

### **MNS 354C. Biology of Fishes.**

Anatomy, physiology, behavior, life history, taxonomy, and distribution of fishes, with emphasis on field sampling and laboratory studies of the coastal biota. Requires several field trips in addition to lecture hours, including one weekend trip. Prerequisite: Upper-division standing, six semester hours of coursework in biological sciences, or consent of instructor.

### **MNS 354E. Aquatic Microbiology.**

Ecology, physiology, distribution, and growth of heterotrophic and autotrophic bacteria and fungi in waters and sediments. Three lecture hours a week for one semester. Marine Sciences 354E and 384E may not both be counted. Prerequisite: Biology 311D, Chemistry 302 or 302H, and consent of instructor.

### **MNS 354F. Marine Geology.**

Survey of the origin, structure, stratigraphy, and sedimentology of marine basins and continental margins. Three lecture hours a week for one semester. Marine Sciences 354F and 384F may not both be counted. Prerequisite: Upper-division standing; and six semester hours of coursework in chemistry, marine science, or geological sciences, or consent of instructor.

### **MNS 354J. Marine Chemistry.**

Introduction to marine and environmental chemistry, including the distribution of elements in seawater, the geochemical and oceanographic processes controlling and affected by these distributions, and the effects of human activities on marine chemical processes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing, and Chemistry 301 and 302; or consent of instructor.

### **MNS 354Q. Marine Environmental Science.**

Application of the principles of marine science to the study of environmental issues: toxicology, biogeochemical cycles, and biological and ecological impacts of xenobiotic materials in the coastal zone. The equivalent of three lecture hours a week for one semester with field trips to the Marine Science Institute in Port Aransas, Texas, to be arranged. Prerequisite: Biology 311D, and Chemistry 302 or 302H.

### **MNS 354T. Biological Oceanography.**

Introduction to the organisms in the sea, their adaptations to the environment, and the factors that control their distribution and abundance. The course emphasizes laboratory and field work with organisms found in the coastal waters of Texas. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Biology 311D.

### **MNS 354U. Biology of Sharks, Skates, and Rays.**

Ecology, anatomy, and physiology of elasmobranch fishes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Biology 354L, 361T, or Marine Sciences 354C and three additional upper-division biology or marine science hours or consent of instructor.

### **MNS 355C. Physiology of Fishes.**

Physiology of major organ systems of both marine and freshwater fishes. Three lecture hours a week for one semester. Prerequisite: Upper-division standing; and Biology 311D, and Chemistry 302 or 302H, or consent of instructor.

### **MNS 367K. Human Exploration and Exploitation of the Sea.**

Review of the history of ocean exploration including major oceanographic expeditions. Discussion of current topics in ocean exploration and exploitation of marine resources, the impact of resource exploitation on biological systems, and the development of marine policy. An oral presentation is required. Three lecture hours a week for one semester. Prerequisite: Upper-division standing and Marine Sciences 307 with a grade of at least B-.

### **MNS 170, 270, 370. Special Studies in Marine Science.**

Supervised individual instruction and research in marine science field and laboratory techniques. The equivalent of one, two, or three class hours a week for one semester, at the Marine Science Institute at Port Aransas. May be repeated for credit. Prerequisite: Six semester

hours of upper-division coursework in science, a University grade point average of at least 3.00, and written consent of instructor.

## **Department of Mathematics**

The Department of Mathematics offers a wide variety of courses both for math majors and for non-majors. Students interested in mathematics as a first or second major should consult the advisers in the Mathematics, Physics, and Astronomy Advising Center, in RLM 4.101.

Course prerequisites are enforced. Most entry-level mathematics courses have an appropriate score on the mathematics placement exam as a prerequisite. In such courses, students must be prepared to present proof of their score immediately after classes have begun; those unable to meet the score will be dropped.

Students may check the current *Course Schedule* available at <http://registrar.utexas.edu/schedules> or go to the math web page at <http://www.ma.utexas.edu> for details about the prerequisite required for their course.

Students who plan to use transfer credit to meet the prerequisite of a mathematics course must submit an official transcript to the Office of Admissions so that the credit may be added to their official university record. In addition to sending a transcript, students are encouraged to retain hard copies of their grade reports for proof of prerequisite until their transcripts are processed.

Students who wish to enroll in conference courses in the Department of Mathematics must submit consent of instructor forms to the department before registering. Forms are available in the Advising Center.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

### **Actuarial Foundations: ACF**

#### **Lower-Division Courses**

#### **ACF 110, 210, 310, 410. Conference Course.**

Supervised study of selected topics, by individual arrangement with department and instructor. Conference course. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

#### **ACF 110T. Conference Course: Texas Department of Insurance Internship.**

Supervised internship at the Texas Department of Insurance. Conference course. May be repeated for credit. Admission by application only. Students must apply to the director of the concentration in actuarial studies the semester before they take the course.

#### **ACF 112M. Actuarial Laboratory on Probability and Statistics.**

Problems and supplementary instruction in probability and statistics, especially as required for the Society of Actuaries and Casualty

Actuarial Society Exam 110. Three laboratory hours a week for one semester. Prerequisite: Mathematics 362K, credit or registration for Mathematics 378K, and consent of the director of the concentration in actuarial studies.

## Upper-Division Courses

### ACF 329. Theory of Interest.

Measurement of interest, present and accumulated value, amortization, sinking funds, bonds, duration, and immunization. Covers the interest-theory portion of an exam of the Society of Actuaries and the Casualty Actuarial Society. Three lecture hours a week for one semester. Actuarial Foundations 329 and Mathematics 389F may not both be counted. Prerequisite: Mathematics 408D, 308L, 408L, or 408S with a grade of at least C-.

### ACF 129D. Introductory Actuarial Financial Mathematics.

Introductory analysis of financial derivatives. Covers the financial derivatives portion of the syllabus for the professional actuarial exam on financial mathematics. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Credit with a grade of at least C- or registration for Actuarial Foundations 329.

## Mathematics: M

### Lower-Division Courses

#### M 301 (TCCN: MATH 1314). College Algebra.

Topics include a brief review of elementary algebra; linear, quadratic, exponential, and logarithmic functions; polynomials; systems of linear equations; applications. Three lecture hours a week for one semester. Usually offered only in the summer session. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Credit for Mathematics 301 may not be earned after a student has received credit for any calculus course with a grade of C- or better. Prerequisite: A passing score on the mathematics section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).

#### M 302 (TCCN: MATH 1332). Introduction to Mathematics.

Intended primarily for general liberal arts students seeking knowledge of the nature of mathematics as well as training in mathematical thinking and problem solving. Topics include number theory and probability; additional topics are chosen by the instructor. Three lecture hours a week for one semester. Mathematics 302 and 303F may not both be counted. A student may not earn credit for Mathematics 302 after having received credit for any calculus course. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Three units of high school mathematics at the level of Algebra I or higher, and a passing score on the mathematics section of the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test).

#### M 303D (TCCN: MATH 1324). Applicable Mathematics.

An entry-level course for the nontechnical student, dealing with some of the techniques that allow mathematics to be applied to a variety of problems. Topics include linear and quadratic equations, systems of linear equations, matrices, probability, statistics, exponential and logarithmic functions, and mathematics of finance. Three lecture hours a week for one semester. Mathematics 303D and 303F may not both be counted. A student may not earn credit for Mathematics 303D after having received credit for Mathematics 305G or any calculus course. May not be counted toward a degree in the College of Natural

Sciences. Prerequisite: An appropriate score on the mathematics placement exam.

#### M 303F. Mathematics of Investment.

Simple and compound interest, equivalent rates, equivalent values, annuities, amortization, sinking funds, bonds, depreciation. Three lecture hours a week for one semester. Mathematics 302 and 303F may not both be counted; Mathematics 303D and 303F may not both be counted. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Prerequisite: Three units of high school mathematics at the level of Algebra I or higher.

#### M 403K (TCCN: MATH 1425). Calculus I for Business and Economics.

Differential and integral calculus of algebraic, logarithmic, and exponential functions with applications. Three lecture hours and two discussion sessions a week for one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K, 408N. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: An appropriate score on the mathematics placement exam.

#### M 403L. Calculus II for Business and Economics.

Differential and integral calculus of functions of several variables with applications, infinite series, improper integrals; introductions to probability, differential equations, matrices, systems of linear equations, and linear programming. Three lecture hours and two discussion sessions a week for one semester. Mathematics 403L and 408L (or 308L) may not both be counted. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Prerequisite: Mathematics 403K, 408C, 308L, or 408N with a grade of at least C-.

#### M 305E. Analytic Geometry.

Combines development of methods (including adequate treatment of theory) and acquisition of skills with applications. Three lecture hours a week for one semester. Mathematics 305E and 305K may not both be counted. Mathematics 305E and 305G may not both be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in Mathematics or towards the Bachelor of Science in Mathematics degree. Prerequisite: Mathematics 301.

#### M 305G (TCCN: MATH 2312). Preparation for Calculus.

Study of advanced functions and their graphs and applications, including exponential, logarithmic, and trigonometric functions. Introduction to rates, slopes, and derivatives. Three lecture hours a week for one semester. Mathematics 305G (or 505G) and any college-level trigonometry course may not both be counted. A student may not earn credit for Mathematics 305G (or 505G) after having received credit for any calculus course with a grade of at least C-. Mathematics 301, 305G (or 505G), and equivalent courses may not be counted toward a degree in mathematics. Prerequisite: An appropriate score on the mathematics placement exam.

#### M 408C (TCCN: MATH 2417). Differential and Integral Calculus.

Introduction to the theory and applications of differential and integral calculus of functions of one variable; topics include limits, continuity, differentiation, the mean value theorem and its applications, integration, the fundamental theorem of calculus, and transcendental functions. Three lecture hours and two discussion hours a week for

one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K, 408N. Prerequisite: An appropriate score on the mathematics placement exam.

#### **M 408D (TCCN: MATH 2419). Sequences, Series, and Multivariable Calculus.**

Certain sections of this course are designated as advanced placement or honors sections; they are restricted to students who have scored well on the AP/BC exam, are in the Engineering Honors Program, or have the consent of the mathematics adviser. Such sections and their restrictions are identified in the Course Schedule. Introduction to the theory and applications of sequences and infinite series, including those involving functions of one variable, and to the theory and applications of differential and integral calculus of functions of several variables; topics include parametric equations, sequences, infinite series, power series, vectors, vector calculus, functions of several variables, partial derivatives, gradients, and multiple integrals. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403L, 408D, 408M (or 308M). Prerequisite: Mathematics 408C, 408L, or 408S with a grade of at least C-.

#### **M 408K (TCCN: MATH 2413). Differential Calculus.**

Introduction to the theory and applications of differential calculus of functions of one variable; topics include limits, continuity, differentiation, and the mean value theorem and its applications. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K, 408N. Prerequisite: An appropriate score on the mathematics placement exam.

#### **M 308L, 408L. Integral Calculus.**

Introduction to the theory and applications of integral calculus of functions of one variable; topics include integration, the fundamental theorem of calculus, transcendental functions, sequences, and infinite series. For Mathematics 308L, three lecture hours a week for one semester; for 408L, three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403L, 408L (or 308L), 408S. Prerequisite: Mathematics 408C, 408K, or 408N with a grade of at least C-.

#### **M 308M, 408M. Multivariable Calculus.**

Introduction to the theory and applications of differential and integral calculus of functions of several variables. Includes parametric equations, polar coordinates, vectors, vector calculus, functions of several variables, partial derivatives, gradients, and multiple integrals. For Mathematics 308M, three lecture hours a week for one semester; for 408M, three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403L, 408D, 408M (or 308M). Prerequisite: Mathematics 408L or 408S with a grade of at least C-.

#### **M 408N (TCCN: MATH 2413). Differential Calculus for Science.**

Restricted to students in the College of Natural Sciences. Introduction to the theory of differential calculus of functions of one variable, and its application to the natural sciences. Subjects may include limits and differentiation, with applications to rates of change, extremes, graphing, and exponential growth and decay. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403K, 408C, 408K, 408N.

Prerequisite: An appropriate score on the mathematics placement exam.

#### **M 408R. Differential and Integral Calculus for the Sciences.**

A calculus course for students in the life sciences. Emphasizes representations and analysis of data. Subjects include functions, rates, and derivatives and their applications to problems in biology; differential equations; Riemann integrals; the Euler method; and fundamental theorems of calculus. Three lecture hours and two discussion hours a week for one semester. May not be counted by students with credit for Mathematics 408C, 408K, or 408N. Prerequisite: An appropriate score on the mathematics placement exam.

#### **M 408S (TCCN: MATH 2414). Integral Calculus for Science.**

Restricted to students in the College of Natural Sciences. Introduction to the theory of integral calculus of functions of one variable, and its applications to the natural sciences. Subjects may include integration and its application to area and volume, and transcendental functions, sequences, and series and their application to numerical methods. Three lecture hours and two discussion hours a week for one semester. Only one of the following may be counted: Mathematics 403L, 408L (or 308L), 408S. Prerequisite: Mathematics 408C, 408K, or 408N with a grade of at least C-.

#### **M 110, 210, 310, 410. Conference Course.**

Supervised study in mathematics, with hours to be arranged. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. Some sections may not be counted toward any mathematics or science degree requirement; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor. Forms are available in the department office or in the Mathematics, Physics, and Astronomy Advising Center.

#### **M 210E. Emerging Scholars Seminar.**

Restricted to students in the Emerging Scholars Program. Supplemental problem-solving laboratory for precalculus, calculus, or advanced calculus courses for students in the Emerging Scholars Program. Three or four laboratory hours a week for one semester. May be repeated for credit. Offered on the pass/fail basis only.

#### **M 310P. Modern Mathematics: Plan II.**

Restricted to Plan II students. Significant developments in modern mathematics. Topics may include fractals, the fourth dimension, statistics and society, and techniques for thinking about quantitative problems. Three lecture hours a week for one semester. May not be counted toward a degree in mathematics.

#### **M 110T, 210T, 310T, 410T. Topics in Mathematics.**

One, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### **M 315C. Foundations, Functions, and Regression Models.**

In-depth study of topics from secondary school mathematics. Emphasizes the development of the concept of function, exploring function patterns in data sets, and the connections between the main topics of mathematics associated with a secondary school curriculum. Use of appropriate technology is explored. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mathematics 408C and enrollment in a teaching preparation program, or consent of instructor.



**M 316 (TCCN: MATH 1342, MATH 2342). Elementary Statistical Methods.**

Graphical presentation, frequency functions, distribution functions, averages, standard deviation, variance, curve-fitting, and related topics. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: An appropriate score on the mathematics placement exam.

**M 316K (TCCN: MATH 1350). Foundations of Arithmetic.**

Restricted to students in a teacher preparation program. An analysis, from an advanced perspective, of the concepts and algorithms of arithmetic, including sets; numbers; numeration systems; definitions, properties, and algorithms of arithmetic operations; and percents, ratios, and proportions. Problem solving is stressed. Three lecture hours a week for one semester. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Credit for Mathematics 316K may not be earned after the student has received credit for any calculus course with a grade of C- or better, unless the student is registered in the College of Education. Prerequisite: Mathematics 302, 303D, 305G (or 505G), or 316 with a grade of at least C-.

**M 316L (TCCN: MATH 1351). Foundations of Geometry, Statistics, and Probability.**

Restricted to students in a teacher preparation program. An analysis, from an advanced perspective, of the basic concepts and methods of geometry, statistics, and probability, including representation and analysis of data; discrete probability, random events, and conditional probability; measurement; and geometry as approached through similarity and congruence, through coordinates, and through transformations. Problem solving is stressed. Three lecture hours a week for one semester. May not be counted toward the major requirement for the Bachelor of Arts, Plan I, degree with a major in mathematics or toward the Bachelor of Science in Mathematics degree. Credit for Mathematics 316L may not be earned after the student has received credit for any calculus course with a grade of C- or better, unless the student is registered in the College of Education. Prerequisite: Mathematics 316K with a grade of at least C-.

**M 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Mathematics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Mathematics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

**M 325K. Discrete Mathematics.**

Provides a transition from the problem-solving approach of Mathematics 408C and 408D to the rigorous approach of advanced courses. Topics include logic, set theory, relations and functions, combinatorics, and graph theory and graph algorithms. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-; or consent of instructor.

**M 326K. Foundations of Number Systems.**

Restricted to students in a teacher preparation program or who have consent of instructor. Study of number-related topics in middle-grade and secondary school mathematics. Topics include place value; meanings of arithmetic operations; analysis of computation methods; historical development of number concepts and notation; and rational, irrational, algebraic, transcendental, and complex numbers. Emphasis is on communicating mathematics, developing pedagogical understanding of concepts and notation, and using both informal reasoning and proof. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-.

**M 427K. Advanced Calculus for Applications I.**

Ordinary and partial differential equations and Fourier series. Five class hours a week for one semester. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-.

**M 427L. Advanced Calculus for Applications II.**

Matrices, elements of vector analysis and calculus of functions of several variables, including gradient, divergence, and curl of a vector field, multiple integrals and chain rules, length and area, line and surface integrals, Green's theorems in the plane and space, and, if time permits, complex analysis. Five class hours a week for one semester. Prerequisite: Mathematics 408D or 408M with a grade of at least C-.

**M 328K. Introduction to Number Theory.**

Provides a transition from the problem-solving approach of Mathematics 408C and 408D to the rigorous approach of advanced courses. Properties of the integers, divisibility, linear and quadratic forms, prime numbers, congruences and residues, quadratic reciprocity, number theoretic functions. Three lecture hours a week for one semester. Prerequisite: Mathematics 341 with a grade of at least C-.

**M 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Mathematics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Mathematics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

**M 329W. Cooperative Mathematics.**

This course covers the work period of mathematics students in the Cooperative Education program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application through the College of Natural Sciences Career Services Office; Mathematics 408D, 408L, or 408S with a grade of at least C-; a grade of at least C- in two of the following courses: Mathematics 325K, 427K, 341, 362K, or 378K; and consent of the undergraduate adviser.

### **M 333L. Structure of Modern Geometry.**

Axiom systems, transformational geometry, introduction to non-Euclidean geometries, and other topics in geometry; use of these ideas in teaching geometry. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-; or upper-division standing and consent of instructor.

### **M 339J. Probability Models with Actuarial Applications.**

Introductory actuarial models for life insurance, property insurance, and annuities. With Mathematics 349P, covers the syllabus for the professional actuarial exam on model construction. Three lecture hours a week for one semester. Prerequisite: Mathematics 358K or 378K with a grade of at least C-.

### **M 139S. Seminar on Actuarial Practice.**

Presentations by working actuaries on current issues in actuarial practice. One lecture hour a week for one semester. Offered on the pass/fail basis only. Prerequisite: Actuarial Foundations 329; Mathematics 339J or 339U with a grade of at least C-; and credit with a grade of at least C- or registration for Actuarial Foundations 329; and credit with a grade of at least C- or registration for Mathematics 339J, 339U, 339V, 349P (or 449P).

### **M 339U. Actuarial Contingent Payments I.**

Intermediate actuarial models for life insurance, property insurance, and annuities. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C-; credit with a grade of at least C- or registration for Actuarial Foundations 329; and credit with a grade of at least C- or registration for Mathematics 340L or 341.

### **M 339V. Actuarial Contingent Payments II.**

Advanced actuarial models for life insurance, property insurance, and annuities. Three lecture hours a week for one semester. Prerequisite: Actuarial Foundations 329 and Mathematics 339U with a grade of at least C- in each.

### **M 339W. Financial Mathematics for Actuarial Applications.**

Options and other financial derivatives, pricing models, stock price models, and interest-rate models for actuarial applications. Three lecture hours a week for one semester. Prerequisite: Actuarial Foundations 329 with a grade of at least C-; Actuarial Foundations 129D, or Finance 377 (Topic 2: Financial Risk Management) with a grade of at least C-; and Mathematics 362K with a grade of at least C-.

### **M 340L. Matrices and Matrix Calculations.**

Restricted to nonmathematics majors. Techniques of matrix calculations and applications of linear algebra. Three lecture hours a week for one semester. Mathematics 340L and 341 may not both be counted. Prerequisite: Mathematics 408C, 408K, or 408N with a grade of at least C-.

### **M 341. Linear Algebra and Matrix Theory.**

Restricted to mathematics majors. Vector spaces, linear transformations, matrices, linear equations, determinants. Some emphasis on rigor and proofs. Mathematics 340L and 341 may not both be counted. Prerequisite: Mathematics 408D or 408M with a grade of at least C-.

### **M 343K. Introduction to Algebraic Structures.**

Elementary properties of groups and rings, including symmetric groups, properties of the integers, polynomial rings, elementary field theory. Three lecture hours a week for one semester. Students who

have received a grade of C- or better in Mathematics 373K may not take Mathematics 343K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341.

### **M 343L. Applied Number Theory.**

Basic properties of integers, including properties of prime numbers, congruences, and primitive roots. Introduction to finite fields and their vector spaces with applications to encryption systems and coding theory. Three lecture hours a week for one semester. Prerequisite: Mathematics 328K or 343K with a grade of at least C-.

### **M 343M. Error-Correcting Codes.**

Introduction to applications of algebra and number theory to error-correcting codes, including finite fields, error-correcting codes, vector spaces over finite fields, Hamming norm, coding, and decoding. Three lecture hours a week for one semester. Prerequisite: Mathematics 328K or 341 with a grade of at least C-.

### **M 344K. Intermediate Symbolic Logic.**

Same as Philosophy 344K. A second-semester course in symbolic logic: formal syntax and semantics, basic metatheory (soundness, completeness, compactness, and Loewenheim-Skolem theorems), and further topics in logic. Three lecture hours a week for one semester. Prerequisite: Philosophy 313, 313K, or 313Q.

### **M 346. Applied Linear Algebra.**

Emphasis on diagonalization of linear operators and applications to dynamical systems and ordinary differential equations. Other subjects include inner products and orthogonality, normal mode expansions, vibrating strings and the wave equation, and Fourier series. Three lecture hours a week for one semester. Prerequisite: Mathematics 341 or 340L with a grade of at least C-.

### **M 348. Scientific Computation in Numerical Analysis.**

Introduction to mathematical properties of numerical methods and their applications in computational science and engineering. Introduction to object-oriented programming in an advanced language. Study and use of numerical methods for solutions of linear systems of equations; nonlinear least-squares data fitting; numerical integration; and solutions of multidimensional nonlinear equations and systems of initial value ordinary differential equations. Three lecture hours a week for one semester. Prerequisite: Computer Science 303E or 307, and Mathematics 341 or 340L with a grade of at least C-.

### **M 349P. Actuarial Statistical Estimates.**

Statistical estimation procedures for random variables and related quantities in actuarial models. With Mathematics 339J, covers the syllabus for the professional actuarial exam on model construction. Three lecture hours a week for one semester. Prerequisite: Mathematics 339J, and 341 or 340L, with a grade of at least C- in each.

### **M 349R. Applied Regression and Time Series.**

Introduction to simple and multiple linear regression and to elementary time-series models, including auto-regressive and moving-average models. Emphasizes fitting models to data, evaluating models, and interpreting results. Three lecture hours a week for one semester. Prerequisite: Mathematics 358K or 378K with a grade of at least C-, or an introductory statistics course and consent of the director of the concentration in actuarial studies.

**M 349T. Time Series and Survival-Model Estimation.**

Introduction to the probabilistic and statistical properties of time series; parameter estimation and hypothesis testing for survival models. Covers 30 percent of the syllabus for exam #4 of the Society of Actuaries and the Casualty Actuarial Society. Three lecture hours a week for one semester. Prerequisite: Mathematics 339U, 341 or 340L, and 358K or 378K.

**M 358K. Applied Statistics.**

Exploratory data analysis, correlation and regression, data collection, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Mathematics 358K and Statistics and Scientific Computation 321 may not both be counted. Prerequisite: Mathematics 362K with a grade of at least C-.

**M 360M. Mathematics as Problem Solving.**

Discussion of heuristics, strategies, and methods of evaluating problem solving, and extensive practice in both group and individual problem solving. Communicating mathematics, reasoning, and connections among topics in mathematics are emphasized. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-; and written consent of instructor.

**M 361. Theory of Functions of a Complex Variable.**

Elementary theory and applications of analytic functions, series, contour integration, and conformal mappings. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K or 427L with a grade of at least C- or consent of instructor.

**M 361K. Introduction to Real Analysis.**

A rigorous treatment of the real number system, of real sequences, and of limits, continuity, derivatives, and integrals of real-valued functions of one real variable. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 365C may not take Mathematics 361K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341.

**M 362K. Probability I.**

An introductory course in the mathematical theory of probability, fundamental to further work in probability and statistics, includes basic probability properties, conditional probability and independence, various discrete and continuous random variables, expectation and variance, central limit theorem, and joint probability distributions. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-.

**M 362M. Introduction to Stochastic Processes.**

Introduction to Markov chains, birth and death processes, and other topics. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C-.

**M 364K. Vector and Tensor Analysis I.**

Invariance, vector algebra and calculus, integral theorems, general coordinates, introductory differential geometry and tensor analysis, applications. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K or 427L with a grade of at least C-.

**M 364L. Vector and Tensor Analysis II.**

Continuation of Mathematics 364K, with emphasis on tensor and extensor analysis. Riemannian geometry and invariance. Three lecture hours a week for one semester. Prerequisite: Mathematics 364K with a grade of at least C-.

**M 365C. Real Analysis I.**

A rigorous treatment of the real number system, Euclidean spaces, metric spaces, continuity of functions in metric spaces, differentiation and Riemann integration of real-valued functions of one real variable, and uniform convergence of sequences and series of functions. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 365C may not take Mathematics 361K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341. Students who receive a grade of C- in one of the prerequisite courses are advised to take Mathematics 361K before attempting 365C. Students planning to take Mathematics 365C and 373K concurrently should consult a mathematics adviser.

**M 365D. Real Analysis II.**

Recommended for students planning to undertake graduate work in mathematics. A rigorous treatment of selected topics in real analysis, such as Lebesgue integration, or multivariate integration and differential forms. Three lecture hours a week for one semester. Prerequisite: Mathematics 365C with a grade of at least C-.

**M 365G. Curves and Surfaces.**

Calculus applied to curves and surfaces in three dimensions: curvature and torsion of space curves, Gauss map and curvature of surfaces, Gauss theorem, geodesics, and the Gauss-Bonnet theorem. Three lecture hours a week for one semester. Prerequisite: Credit with a grade of at least C- or registration for Mathematics 365C.

**M 367K. Topology I.**

An introduction to topology, including sets, functions, cardinal numbers, and the topology of metric spaces. Three lecture hours a week for one semester. Prerequisite: Mathematics 361K or 365C or consent of instructor.

**M 367L. Topology II.**

Various topics in topology, primarily of a geometric nature. Three lecture hours a week for one semester. Prerequisite: Mathematics 367K with a grade of at least C- or consent of instructor.

**M 368K. Numerical Methods for Applications.**

Continuation of Mathematics 348. Topics include splines, orthogonal polynomials and smoothing of data, iterative solution of systems of linear equations, approximation of eigenvalues, two-point-boundary value problems, numerical approximation of partial differential equations, signal processing, optimization, and Monte Carlo methods. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 367, Mathematics 368K, Physics 329. Prerequisite: Mathematics 348 with a grade of at least C-.

**M 372. Fourier Series and Boundary Value Problems.**

Discussion of differential equations of mathematical physics and representation of solutions by Green's functions and eigenfunction expansions. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.

### **M 372K. Partial Differential Equations and Applications.**

Partial differential equations as basic models of flows, diffusion, dispersion, and vibrations. Topics include first- and second-order partial differential equations and classification (particularly the wave, diffusion, and potential equations), and their origins in applications and properties of solutions. Includes the study of characteristics, maximum principles, Green's functions, eigenvalue problems, and Fourier expansion methods. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.

### **M 373K. Algebraic Structures I.**

A study of groups, rings, and fields, including structure theory of finite groups, isomorphism theorems, polynomial rings, and principal ideal domains. Three lecture hours a week for one semester. Students who have received a grade of C- or better in Mathematics 373K may not take Mathematics 343K. Prerequisite: Consent of the undergraduate adviser, or two of the following courses with a grade of at least C- in each: Mathematics 325K or Philosophy 313K, Mathematics 328K, Mathematics 341. Students who receive a grade of C- in one of the prerequisite courses are advised to take Mathematics 343K before attempting 373K. Students planning to take Mathematics 365C and 373K concurrently should consult a mathematics adviser.

### **M 373L. Algebraic Structures II.**

Recommended for students planning to undertake graduate work in mathematics. Topics from vector spaces and modules, including direct sum decompositions, dual spaces, canonical forms, and multilinear algebra. Three lecture hours a week for one semester. Prerequisite: Mathematics 373K with a grade of at least C-.

### **M 374. Fourier and Laplace Transforms.**

Operational properties and application of Laplace transforms; some properties of Fourier transforms. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K with a grade of at least C-.

### **M 374G. Linear Regression Analysis.**

Fitting of linear models to data by the method of least squares, choosing best subsets of predictors, and related materials. Three lecture hours a week for one semester. Prerequisite: Mathematics 358K or 378K with grade of at least C-, Mathematics 341 or 340L, and consent of instructor.

### **M 374K. Fourier and Laplace Transforms.**

Continuation of Mathematics 374. Introduction to other integral transforms, such as Hankel, Laguerre, Mellin, Z. Three lecture hours a week for one semester. Prerequisite: Mathematics 374 with a grade of at least C-.

### **M 374M. Mathematical Modeling in Science and Engineering.**

Tools for studying differential equations and optimization problems that arise in the engineering and physical sciences. Includes dimensional analysis and scaling, regular and singular perturbation methods, optimization and calculus of variations, and stability. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, and 340L or 341, with a grade of at least C- in each; and some basic programming skills.

### **M 175, 275, 375, 475. Conference Course.**

Supervised study in mathematics, with hours to be arranged. May be repeated for credit. Prerequisite: Upper-division standing.

### **M 375C. Conference Course (Computer-Assisted).**

Supervised study in mathematics on material requiring use of computing resources, with hours to be arranged. Conference course. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **M 375D. Discovery: An Introduction to Advanced Study in Mathematics.**

Capstone course designed primarily for UTeach pre-service mathematics majors considering discovery teaching methodology and/or graduate work in mathematics or mathematics education. Ties together foundational topics in the primary strands of mathematics present in a typical graduate mathematics program; included are selected topics from analysis, algebra, number theory, and topology. Three lecture hours a week for one semester. Mathematics 375D and 375T (Topic: Discovery: An Introduction to Advanced Study in Mathematics) may not both be counted. Prerequisite: Two proof-based mathematics courses with a grade of at least C-, or consent of instructor.

### **M 175T, 275T, 375T, 475T. Topics in Mathematics.**

One, two, three, or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing; additional prerequisites may vary with the topic and are given in the Course Schedule.

### **M 376C. Methods of Applied Mathematics.**

Variational methods and related concepts from classical and modern applied mathematics. Models of conduction and vibration that lead to systems of linear equations and ordinary differential equations, eigenvalue problems, initial and boundary value problems for partial differential equations. Topics may include a selection from diagonalization of matrices, eigenfunctions and minimization, asymptotics of eigenvalues, separation of variables, generalized solutions, and approximation methods. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Mathematics 427K, and Mathematics 341 or 340L, with a grade of at least C- in each.

### **M 378K. Introduction to Mathematical Statistics.**

Same as Statistics and Scientific Computation 378. Sampling distributions of statistics, estimation of parameters (confidence intervals, method of moments, maximum likelihood, comparison of estimators using mean square error and efficiency, sufficient statistics), hypothesis tests (p-values, power, likelihood ratio tests), and other topics. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C-.

### **M 379H. Honors Tutorial Course.**

Directed reading, research, and/or projects, under the supervision of a faculty member, leading to an honors thesis. Conference course. Prerequisite: Admission to the Mathematics Honors Program; Mathematics 365C, 367K, 373K, or 374G with a grade of at least A-, and another of these courses with a grade of at least B-; and consent of the honors adviser.



# Neuroscience Program

## Neuroscience: NEU

### Upper-Division Courses

#### NEU 330. Neural Systems I.

Introduction to the nervous system with an emphasis on brain organization, neuron physiology, perceptual systems, and motor systems. Intended for neuroscience majors and those considering neuroscience as a major. Three lecture hours a week for one semester. Biology 337 (Topic: Neural Systems I) and Neuroscience 330 may not both be counted.

#### NEU 335. Neural Systems II.

Introduction to the nervous system with an emphasis on neural development and on the neural mechanisms of memory, emotions, and other higher cognitive functions. Intended for neuroscience majors and those considering neuroscience as a major. Three lecture hours a week for one semester. Biology 337 (Topic: Neural Systems II) and Neuroscience 335 may not both be counted. Prerequisite: Neuroscience 330 with a grade of at least B-, or consent of instructor.

#### NEU 366M. Mathematical and Computational Neuroscience I.

Same as Biology 366M. First course in a two-semester sequence on mathematical and computational neuroscience. Exploration of linear systems, including linear algebra, differential equations, Fourier analysis, convolution, and related areas, with an emphasis on applications to neuroscience. Three lecture hours a week for one semester. Prerequisite: Biology 325 or 325H with a grade of at least C-; and credit or registration for Neuroscience 335 and Mathematics 408D or 408m.

#### NEU 366N. Mathematical and Computational Neuroscience II.

Same as Biology 366N. Continuation of Biology 366M or Neuroscience 366M. Topics include various mathematical and computational areas that are common in neuroscience research, with emphasis on nonlinear systems, probability, random processes, information theory, and their applications in neuroscience. Three lecture hours a week for one semester. Prerequisite: Biology 366M or Neuroscience 366M.

# Department of Physics

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Physical Science: P S

### Lower-Division Courses

#### P S 303. Introductory Physical Science I: Mechanics and Heat.

Designed for students with minimum prior preparation in mathematics and physics. Especially appropriate for prospective elementary school teachers. Inquiry laboratory approach to basic concepts of measurement, forces, motion, energy, temperature, and heat. Four hours of integrated laboratory and lecture a week for one semester.

May not be counted toward a degree in the College of Natural Sciences.

#### P S 304. Introductory Physical Science II: Electricity, Light, and Optics.

Inquiry laboratory approach to electricity, magnetism, waves, light, and optical instruments. Four hours of integrated laboratory and lecture a week for one semester. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Physical Science 303.

### Upper-Division Courses

#### P S 350. Physical Science for Elementary and Middle School Teachers.

Designed for kindergarten through sixth grade teachers with minimal preparation in mathematics (college algebra) and no preparation in physics. An inquiry laboratory in the basic concepts of light, electricity, and magnetism. Three hours of integrated laboratory and lecture a day for three weeks.

#### P S 367M. Physical Science: Methods of Astronomy.

Same as Astronomy 367M. An introductory, self-paced course in the methods of astronomy that emphasizes learning astronomical principles through observations. Six laboratory hours a week for one semester. May not be counted toward the Bachelor of Arts, Plan I, degree with a major in astronomy. Prerequisite: Upper-division standing and nine semester hours of coursework in mathematics and/or science, including one of the following: Physical Science 303, 304, Astronomy 301, 302, 303. Equivalent preparation in mathematics, physics, chemistry, or earth sciences may be substituted with written approval of the instructor.

#### P S 375. Individual Study in Physical Science.

Intended primarily for preservice and in-service teachers. Guided inquiry reading or laboratory research in physical science. Meets three times a week for one semester, for one hour each meeting. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and written consent of instructor.

## Physics: PHY

### Lower-Division Courses

#### PHY 301. Mechanics.

Designed for students who intend to major in science or mathematics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. Prerequisite: High school physics or consent of the undergraduate adviser; credit or registration for Physics 101L; and one of the following: Mathematics 408C, Mathematics 408K and concurrent enrollment in 408L, or Mathematics 408N and concurrent enrollment in 408S.

#### PHY 101L. Laboratory for Physics 301.

Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 101L, 102M, 103M, 117M. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 301.

**PHY 302K (TCCN: PHYS 1301). General Physics--Technical Course: Mechanics, Heat, and Sound.**

Noncalculus technical course in physics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. Prerequisite: High school trigonometry or Mathematics 305G; and credit or registration for Physics 102M.

**PHY 302L (TCCN: PHYS 1302). General Physics--Technical Course: Electricity and Magnetism, Light, Atomic and Nuclear Physics.**

Noncalculus technical course in physics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 302K and 102M and credit or registration for Physics 102N.

**PHY 102M (TCCN: PHYS 1101). Laboratory for Physics 302K.**

Two laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 101L, 102M, 103M, 117M. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 302K.

**PHY 102N (TCCN: PHYS 1102). Laboratory for Physics 302L.**

Two laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 102N, 103N, 116L, 117N. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 302L.

**PHY 303K (TCCN: PHYS 2325). Engineering Physics I.**

A general survey of physics; primarily laws of motion, heat, and wave phenomena. Three lecture hours and one discussion hour a week for one semester. In most sections, examinations are given on Wednesday nights; see the Course Schedule for more information. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. Prerequisite: High school physics or consent of the undergraduate adviser; Mathematics 408C, Mathematics 408K and concurrent enrollment in 408L, or Mathematics 408N and concurrent enrollment in 408S; and credit or registration for Physics 103M.

**PHY 303L (TCCN: PHYS 2326). Engineering Physics II.**

Electricity and magnetism, optics, and atomic phenomena. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 303K and 103M; Mathematics 408D, Mathematics 408L and concurrent enrollment in 408M, or Mathematics 408S and concurrent enrollment in 408M; and credit or registration for Physics 103N.

**PHY 103M (TCCN: PHYS 2125). Laboratory for Physics 303K.**

Two laboratory hours a week for one semester. Only one of the following may be counted: Physics 101L, 102M, 103M, 117M. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 303K.

**PHY 103N (TCCN: PHYS 2126). Laboratory for Physics 303L.**

Two laboratory hours and one discussion hour a week for one semester. Only one of the following may be counted: Physics 102N, 103N, 116L, 117N. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 303L.

**PHY 104. Introductory Physics Seminar.**

Suggested for beginning physics majors. Discussion of the development of important ideas in physics, with emphasis on their relevance to contemporary research. One lecture hour a week for one semester. Offered on the pass/fail basis only.

**PHY 306. Elementary Physics Methods.**

Designed for students who have not had high school physics, have weak problem-solving skills, and need preparation for Physics 301 or 303K. Three lecture hours a week for one semester. May not be counted toward any degree. Prerequisite: High school trigonometry or Mathematics 305G.

**PHY 108. Introduction to Research.**

Introductory laboratory experience; use of tools and test equipment; beginning apprenticeship in active physics research. One class hour a week for one semester. May be repeated for credit. Offered on the pass/fail basis only. Prerequisite: Consent of instructor and approval of an undergraduate adviser.

**PHY 308F. Introduction to Research.**

Introductory laboratory experience; use of tools and test equipment; beginning apprenticeship in active physics research. One lecture hour and eight laboratory hours a week for one semester. Prerequisite: Consent of instructor and the undergraduate adviser.

**PHY 309K (TCCN: PHYS 1305). Elementary Physics for Nontechnical Students.**

Designed for students who do not intend to do further work in natural sciences, engineering, mathematics, or medicine. Mechanics, heat, and sound. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. May not be counted toward a degree in the College of Natural Sciences.

**PHY 309L (TCCN: PHYS 1307). Elementary Physics for Nontechnical Students.**

Designed for students who do not intend to do further work in natural sciences, engineering, mathematics, or medicine. Electricity and magnetism, light, atomic and nuclear physics. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. May not be counted toward a degree in the College of Natural Sciences. Prerequisite: Physics 309K.

**PHY 110C. Conference Course.**

Supervised study of selected topics in physics, by individual arrangement with department and instructor. Conference course. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Written consent of instructor.

### **PHY 315. Wave Motion and Optics.**

Study of general properties of waves; examples include sound, electromagnetic, and mechanical waves; special emphasis on light and optics. Three lecture hours a week for one semester. Prerequisite: Mathematics 427K, Physics 316 and 116L, and credit or registration for Physics 115L.

### **PHY 115L. Laboratory for Physics 315.**

Three laboratory hours a week for one semester. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 315.

### **PHY 316. Electricity and Magnetism.**

Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. Prerequisite: Physics 301 and 101L; Mathematics 408D, Mathematics 408L and concurrent enrollment in 408M, or Mathematics 408S and concurrent enrollment in 408M; and credit or registration for Physics 116L.

### **PHY 116L. Laboratory for Physics 316.**

Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 102N, 103N, 116L, 117N. May not be counted toward a degree unless prerequisite is observed. Prerequisite: Credit or registration for Physics 316.

### **PHY 317K. General Physics I.**

An introductory course designed and recommended primarily for premedical students and others in the biomedical sciences whose professional or preprofessional training includes an introductory course in calculus. Mechanics, heat, and sound, with biomedical applications. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 301, 302K, 303K, 309K, 317K. May not be counted toward the Bachelor of Science in Astronomy or Bachelor of Science in Physics. Satisfies most medical and dental school requirements for physics. Prerequisite: High school physics or consent of the undergraduate adviser; Mathematics 408C, Mathematics 408K and concurrent enrollment in 408L, or Mathematics 408N and concurrent enrollment in 408S; and credit or registration for Physics 117M.

### **PHY 317L. General Physics II.**

Designed and recommended primarily for premedical students and others in the biomedical sciences whose professional or preprofessional training includes an introductory course in calculus. Electricity and magnetism, light, atomic and molecular physics, nuclear physics, and their biomedical applications. Three lecture hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 302L, 303L, 309L, 316, 317L. May not be counted toward the Bachelor of Science in Astronomy or the Bachelor of Science in Physics. Satisfies most medical and dental school requirements for physics. Prerequisite: Physics 317K and 117M and credit or registration for Physics 117N.

### **PHY 117M. Laboratory for Physics 317K.**

Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 101L, 102M, 103M, 117M. Prerequisite: Credit or registration for Physics 317K.

### **PHY 117N. Laboratory for Physics 317L.**

Three laboratory hours a week for one semester. Only one of the following may be counted without prior approval of the department: Physics 102N, 103N, 116L, 117N. Prerequisite: Credit or registration for Physics 317L.

### **PHY 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Physics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Physics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **PHY 321. Modern Physics: Plan II.**

Restricted to Plan II students. Conceptual foundations of modern physics. Examines quantum mechanics, quantum field theory, relativity, and general relativity, including large-scale structure and cosmology; and the development of analytic problem-solving skills, including estimation. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **PHY 329. Introduction to Computational Physics.**

Computational methods for problem solving and research in physics; numerical analysis and computer simulation methods for physics applications using different types of computers. Three lecture hours a week for one semester. Only one of the following may be counted: Computer Science 367, Mathematics 368K, Physics 329. Prerequisite: Physics 315 and 115L, a programming course at the level of Computer Science 303E or consent of instructor, and credit or registration for Mathematics 341 or 340L.

### **PHY 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Physics.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Physics. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **PHY 329W. Cooperative Physics.**

This course covers the work period of physics students in the Cooperative Education Program, which provides supervised work experience by arrangement with the employer and the supervising instructor. Forty laboratory hours a week for one semester. The student must repeat the course each work period and must take it twice to receive credit toward the degree; at least one of these registrations must be during a long-session semester. No more than three semester hours may be counted toward the major requirement; no more than six semester hours may be counted toward the degree. The student's first registration must be on the pass/fail basis. Prerequisite: Application to become a member of the Cooperative Physics Program, Physics 316, and consent of the undergraduate adviser.

### **PHY 333. Modern Optics.**

Review of geometrical optics, polarization, interference, and optical instruments. Topics include Fourier optics, light propagation in fibers, quantum optics, and coherence. Three lecture hours a week for one semester. Prerequisite: Physics 315, 115L, and Mathematics 427K.

### **PHY 133L. Laboratory for Physics 333.**

Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Physics 333.

### **PHY 336K. Classical Dynamics.**

Elementary linear vector algebra, Newtonian mechanics, Lagrangian mechanics, central force motion, dynamics of rigid bodies, and theory of small oscillations. Three lecture hours a week for one semester. Prerequisite: Physics 315 and 115L, and Mathematics 427L or 364K.

### **PHY 336L. Fluid Dynamics.**

Fundamental concepts of fluid mechanics developed and applied to laminar and turbulent flows. Topics include the Navier-Stokes equations, pipe and channel flow, drag, boundary layers, convection, and rotating fluids. Three lecture hours a week for one semester. Prerequisite: Physics 336K.

### **PHY 338K. Electronic Techniques.**

Elementary circuit theory, amplifiers, feedback, pulse and digital techniques, signal processing, and microprocessors as applied to physics instrumentation. One and one-half lecture hours and three laboratory hours a week for one semester. Prerequisite: Physics 316 and 116L and Mathematics 427K.

### **PHY 341. Selected Topics in Physics.**

Three lecture hours a week for one semester. An additional one-hour problem session is required for some sections; these are identified in the Course Schedule. May not be counted toward the Bachelor of Science in Physics degree without prior approval of the department. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, three semester hours of coursework in a natural science, and three semester hours of coursework in mathematics.

**Topic 1: Energy Production.** The various means that exist or have been suggested for generating energy; comparison in terms of efficiency, safety, and effects on the environment.

**Topic 2: Great Men, Moments, and Ideas.** How our views of matter, energy, and the universe developed.

**Topic 3: Musical Acoustics.** Study of the production, transmission, and perception of the special kind of sound called music, based on the application of elementary principles of physics.

**Topic 4: The Nature of Things.** A qualitative survey of all of physics, from falling bodies to quarks, making heavy use of classroom demonstrations.

**Topic 5: Pseudoscience.** Study of a variety of ideas treated very seriously by the communications media but having no basis in fact, including astrology, extrasensory perception, and flying saucers; why such areas are not part of science.

**Topic 6: Writing.**

**Topic 7: Research Methods: UTeach.**

### **PHY 345. Biophysics.**

Basic concepts of physics developed and applied to biological systems. Topics include energy in living systems, entropic interactions, molecular forces and self-assembly, biopolymers, bio-membranes, cell-cell interactions, pattern formation, collective behavior, higher order systems, population dynamics and evolution. Three lecture

hours a week for one semester. Prerequisite: Upper-division standing, Biology 311D, Chemistry 302, and Physics 355.

### **PHY 352K. Classical Electrodynamics.**

Electrostatic fields, magnetostatic fields, derivation of Green's theorems and functions and of Maxwell's equations. Three lecture hours a week for one semester. Prerequisite: Physics 315 and 115L, and Mathematics 427L or 364K.

### **PHY 353L. Modern Physics Laboratory.**

Laboratory experiments investigating the breakdown of classical physics for microscopic phenomena. Includes absorption and emission spectra, the photoelectric effect, blackbody radiation, the Compton effect, X-ray diffraction, and other experiments in modern physics. Four and one-half laboratory hours a week for one semester. Prerequisite: Physics 315 and 115L.

### **PHY 355. Modern Physics and Thermodynamics.**

Introduction to modern physics and thermodynamics: photons (spectra, photoelectric effect, blackbody radiation, Compton effect), atoms (Rutherford, Bohr), matter waves (Planck, deBroglie, probability interpretation, Schroedinger), nuclei, particles, special relativity, the laws of thermodynamics, and statistical physics. Three lecture hours a week for one semester. Physics 319 and 355 may not both be counted. Prerequisite: Physics 303L, 316, or consent of instructor.

### **PHY 362K. Quantum Physics II: Atoms and Molecules.**

The two-electron atom; spin and statistics; coupling schemes for many-electron atoms; atoms and the radiation field; perturbation methods for decay and collisions; thermal, electrical, and magnetic properties of solids; and free-electron metal and band theory. May include subjects such as superconductivity, Josephson tunneling, and others. Three lecture hours a week for one semester. Prerequisite: Physics 373.

### **PHY 362L. Quantum Physics III: Particles and Nuclei.**

Nuclei and nucleons, their gross properties; the hadrons; symmetries and conservation laws; nuclear stability; electromagnetic, weak, and hadronic interactions; nuclear reactions at low, medium, and high energies; nucleon structure; tools of experimental nuclear physics; models of theoretical nuclear physics; nuclear technology. Three lecture hours a week for one semester. Prerequisite: Physics 373; Physics 362K is recommended.

### **PHY 369. Thermodynamics and Statistical Mechanics.**

Basic concepts of thermal physics; entropy, enthalpy, free energy, phase transitions, equilibrium distribution functions, applications. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Physics 373.

### **PHY 370C. Individual Study in Physics.**

Supervised reading or research in physics. Hours to be arranged. Some sections are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Physics 336K, credit or registration for Physics 352K, and consent of the undergraduate adviser.

### **PHY 670T. Senior Thesis.**

Individual research with faculty supervision. First half involves preparation of proposal; second involves completion of written thesis. Six hours of work a week for one semester, or three hours of work a week for two semesters. Only three semester hours may be counted toward the Bachelor of Science in Physics degree. Prerequisite:



Upper-division standing and nine semester hours of upper-division coursework in physics.

### **PHY 373. Quantum Physics I: Foundations.**

Postulates of quantum mechanics, the bound states of the finite square well, the harmonic oscillator, operator-eigenvalue formalism and selected examples, the hydrogen atom, angular momentum, rigid rotor, and spin. May include simple scattering theory. Three lecture hours a week for one semester. Prerequisite: Physics 336K, and 353L and 355 (or 453); or consent of instructor.

### **PHY 474. Advanced Laboratory I.**

Modern experimental techniques, theory of error, and analysis of experiments; both modern and classical experiments in atomic and nuclear physics, electricity and magnetism, optics and heat. Three lecture hours and eight laboratory hours a week for one semester, with additional laboratory hours to be arranged. With consent of instructor, may be repeated for credit. Prerequisite: Physics 352K, 353L, and 355 (or 453); or consent of the undergraduate adviser. Physics 338K is recommended.

### **PHY 375P. Introductory Plasma Physics.**

Orbit theory and drifts, introduction to plasma stability and waves, applications to plasma confinement and heating. Three lecture hours a week for one semester. Prerequisite: Physics 352K and 369.

### **PHY 375R. Introduction to Relativity.**

Overview of the special and general theories of relativity, with emphasis on recent developments in gravitation. Three lecture hours a week for one semester. Prerequisite: Physics 352K.

### **PHY 375S. Introductory Solid-State Physics.**

Crystal structure, classification of solids, cohesion, thermal and electrical properties of solids, magnetic properties of solids, imperfections. Three lecture hours a week for one semester. Prerequisite: Physics 369 and 373.

### **PHY 379H. Honors Tutorial Course.**

Research project, resulting in a thesis, for outstanding students electing to take the honors program in physics. Conference course. Prerequisite: A University grade point average of at least 3.00, a grade point average in physics of at least 3.50, twelve semester hours of upper-division coursework in physics, and consent of the student's research supervisor and the departmental honors adviser.

## **Division of Statistics and Scientific Computation**

### **Statistics and Scientific Computation: SSC**

#### **Lower-Division Courses**

#### **SSC 302. Data Analysis for the Health Sciences.**

Basic probability and data analysis for the sciences. Subjects include randomness, sampling, distributions, probability models, inference, regression, and nonlinear curve fitting. Three lecture hours and one discussion hour a week for one semester. May not be counted by students with credit for Educational Psychology 371, Mathematics 316, Statistics and Scientific Computation 303, 304, 305,

or 306. Prerequisite: A score of at least 30 on the ALEKS placement examination.

#### **SSC 303. Statistics in Experimental Research.**

An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in experimental science. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: A score of at least 30 on the ALEKS placement examination.

#### **SSC 304. Statistics in Health Care.**

An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in the health sciences. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: A score of at least 30 on the ALEKS placement examination.

#### **SSC 305. Statistics in Policy Design.**

An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in policy evaluation and design. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: A score of at least 30 on the ALEKS placement examination.

#### **SSC 306. Statistics in Market Analysis.**

An introduction to the fundamental concepts and methods of statistics, with emphasis on applications in the analysis of personal and group behaviors. Includes exploratory data analysis, correlation and regression, descriptive statistics, sampling distributions, confidence intervals, and hypothesis testing. Three lecture hours a week for one semester. Only one of the following may be counted: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, 306. Prerequisite: A score of at least 30 on the ALEKS placement examination.

#### **SSC 110T, 210T, 310T, 410T. Topics in Statistics and Computation.**

For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary.

#### **SSC 318. Introduction to Statistical and Scientific Computation.**

An introduction to quantitative analysis using fundamental concepts in statistics and scientific computation. Includes probability, distributions, sampling, interpolation, iteration, recursion, and visualization. Three lecture hours and one laboratory hour a week for one semester.

#### **Upper-Division Courses**

#### **SSC 321. Introduction to Probability and Statistics.**

The basic theory of probability and statistics, with practical applications. Includes fundamentals of probability, distribution theory, sampling models, data analysis, experimental design, statistical inference, interval estimation, and hypothesis testing. Three lecture hours and one discussion hour a week for one semester. Mathematics

358K and Statistics and Scientific Computation 321 may not both be counted. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-.

### **SSC 222. Introduction to Scientific Programming.**

Introduction to programming using both the C and Fortran (95/2003) languages, with applications to basic scientific problems. Covers common data types and structures, control structures, algorithms, performance measurement, and interoperability. Two lecture hours a week for one semester. Statistics and Scientific Computation 222 and 292 may not both be counted. Prerequisite: Credit or registration for Mathematics 408C, 408K, or 408N.

### **SSC 325H. Honors Statistics.**

An introduction to the fundamental theories, concepts, and methods of statistics. Emphasizes probability models, exploratory data analysis, sampling distributions, confidence intervals, hypothesis testing, correlation and regression, and the use of statistical software. Three lecture hours a week for one semester. Prerequisite: Admission to the Dean's Scholars Honors Program in the College of Natural Sciences, or consent of instructor.

### **SSC 328M. Biostatistics.**

Introduction to methods of statistical analysis of biological data. Includes data analysis, basics of experimental design, statistical inference, interval estimation, and hypothesis testing. Three lecture hours and one discussion hour a week for one semester. Only one of the following may be counted: Biology 318M, Biology 328M, Statistics and Scientific Computation 318M, 328M. Prerequisite: Mathematics 408D, 408L, or 408S with a grade of at least C-, and four semester hours of coursework in biology.

### **SSC 329C. Practical Linear Algebra I.**

Matrix representations and properties of matrices; linear equations, eigenvalue problems and their physical interpretation; and linear least squares and elementary numerical analysis. Emphasis on physical interpretation, practical numerical algorithms, and proofs of fundamental principles. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Mathematics 408C, 408K, or 408N.

### **SSC 329D. Practical Linear Algebra II.**

Iterative solutions to linear equations and eigenvalue problems; properties of symmetric and nonsymmetric matrices, exploitation of sparsity and diagonal dominance; introduction to multivariate nonlinear equations; numerical analysis; and selected applications and topics in the physical sciences. Three lecture hours a week for one semester. Prerequisite: Mathematics 340L, 341, or Statistics and Scientific Computation 329C.

### **SSC 335. Scientific and Technical Computing.**

A comprehensive introduction to computing techniques and methods applicable to many scientific disciplines and technical applications. Covers computer hardware and operating systems, systems software and tools, code development, numerical methods and math libraries, and basic visualization and data analysis tools. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M, and prior programming experience.

### **SSC 339. Applied Computational Science.**

Concentrated study in a specific area or areas of application, with an emphasis on modeling and visualization. Areas may include computational biology, computational chemistry, computational applied

mathematics, computational economics, computational physics, or computational geology. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

### **SSC 150K. Data Analysis Applications.**

Introduction to the use of statistical or mathematical applications for data analysis. Two lecture hours a week for eight weeks. Offered on the pass/fail basis only. May be repeated for credit when the topics vary. Offered on the pass/fail basis only. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: SPSS Software.** Offered on the pass/fail basis only.

Prerequisite: Upper-division standing.

**Topic 2: SAS Software.** Offered on the pass/fail basis only.

Prerequisite: Upper-division standing.

**Topic 3: Stata Software.** Offered on the pass/fail basis only.

Prerequisite: Upper-division standing.

**Topic 4: The R Software Environment.** Offered on the pass/fail basis only. Prerequisite: Upper-division standing.

### **SSC 352. Statistical Methods.**

Study of simple and multiple regression, fundamentals of experimental design, and analysis of variance methods. May include logistic regression, Poisson regression, resampling methods, introduction to Bayesian methods, and probability models. Includes substantial use of statistical software. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Mathematics 316, Statistics and Scientific Computation 303, 304, 305, or 306.

### **SSC 358. Special Topics in Statistics.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

### **SSC 367S. Simulation Modeling.**

Basic concepts of discrete-event simulation. Statistical input and output analysis; application of simulation software; modeling of systems under uncertainty. Three lecture hours a week for one semester. Statistics and Scientific Computation 358 (Topic: Simulation Modeling) and 367S may not both be counted. Prerequisite: Upper-division standing; Statistics and Scientific Computation 321 or an equivalent introductory statistics course, with a grade of at least C-; and Mathematics 408C or 408K, with a grade of at least C-.

### **SSC 374C. Parallel Computing for Science and Engineering.**

Study of parallel computing principles, architectures, and technologies; and parallel application development, performance, and scalability. Designed to help prepare students to formulate and develop parallel algorithms to implement effective applications for parallel computing systems. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M; Mathematics 340L; and prior programming experience using C or Fortran on Linux or Unix systems.

### **SSC 374D. Distributed and Grid Computing for Science and Engineering.**

Distributed and grid computing principles and technologies. Covers common modes of grid computing for scientific applications, development of grid-enabled applications, and future trends in grid computing. Three lecture hours a week for one semester.

Prerequisite: Mathematics 408D or 408M; Mathematics 340L; and prior programming experience using C or Fortran on Linux or Unix systems.

### **SSC 374E. Visualization and Data Analysis for Science and Engineering.**

Scientific visualization principles, practices, and technologies, including remote and collaborative visualization. Introduces statistical analysis, data mining, and feature detection. Three lecture hours a week for one semester. Prerequisite: Mathematics 408D or 408M; Mathematics 340L; and prior programming experience using C or Fortran on Linux or Unix systems.

### **SSC 375. Special Topics in Scientific Computation.**

Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

### **SSC 378. Introduction to Mathematical Statistics.**

Same as Mathematics 378K. Sampling distributions of statistics, estimation of parameters (confidence intervals, method of moments, maximum likelihood, comparison of estimators using mean square error and efficiency, sufficient statistics), hypothesis tests (p-values, power, likelihood ratio tests), and other topics. Three lecture hours a week for one semester. Prerequisite: Mathematics 362K with a grade of at least C-.

### **SSC 179R, 279R, 379R, 479R. Undergraduate Research.**

Students work on an individual research project under the supervision of one or more faculty members. For each semester hour of credit earned, the equivalent of one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Upper-division standing and consent of instructor.

## **UTeach-Natural Sciences**

### **UTeach-Natural Sciences: UTS**

#### **Lower-Division Courses**

#### **UTS 101. Secondary Teacher Education Preparation: STEP 1.**

Introduction to mathematics, computer science, and science teaching as a career. Discussions include standards-based lesson design and various teaching and behavior management strategies. Fieldwork consists of planning and teaching four inquiry-based lessons to students in grades three to six in local elementary schools. One and one-half class hours a week for one semester; at least ten hours of fieldwork a semester are also required. Chemistry 107 (Topic: STEP 1--UTeach) and UTeach-Natural Sciences 101 may not both be counted. Prerequisite: A University grade point average of at least 2.20.

#### **UTS 110. Secondary Teacher Education Preparation: STEP 2.**

Topics may include routes to teacher certification in mathematics, computer science, and science teaching; various teaching methods that are designed to meet instructional goals; and learner outcomes. Students develop and teach three inquiry-based lessons in their field in a middle school, and participate in peer coaching. One and one-half class hours a week for one semester; at least twenty hours of

fieldwork a semester are also required. Biology 101C (Topic: STEP 2) and UTeach-Natural Sciences 110 may not both be counted. Prerequisite: UTeach-Natural Sciences 101 with a grade of at least C-, and a University grade point average of at least 2.20.

### **Upper-Division Courses**

#### **UTS 350. Knowing and Learning in Math and Science.**

Same as Curriculum and Instruction 365C. Restricted to students in the UTeach-Natural Sciences program. Psychological foundations of learning; problem solving in mathematics and science education utilizing technology; principles of expertise and novice understanding of subject matter; implications of high-stakes testing; and foundations of formative and summative assessment. Three lecture hours a week for one semester; additional hours may be required. Only one of the following may be counted: Curriculum and Instruction 365C, 371 (Topic 21: Knowing and Learning in Math and Science), UTeach-Natural Sciences 350. Prerequisite: Credit with a grade of at least C- or registration for UTeach-Natural Sciences 101.

#### **UTS 355. Classroom Interactions.**

Same as Curriculum and Instruction 365D. Restricted to students in the UTeach-Natural Sciences program. Principles of delivering effective instruction in various formats (lecture, lab activity, collaborative settings); examination of gender, class, race, and culture in mathematics and science education; overview of policy related to mathematics and science education. Three lecture hours a week for one semester; additional hours may be required. Only one of the following may be counted: Curriculum and Instruction 365D, 371 (Topic 20: Classroom Interactions), UTeach-Natural Sciences 355. Prerequisite: A University grade point average of at least 2.50, Curriculum and Instruction 365C or UTeach-Natural Sciences 350 with a grade of at least C-, and UTeach-Natural Sciences 110 with a grade of at least C-.

#### **UTS 360. Project-Based Instruction.**

Same as Curriculum and Instruction 365E. Restricted to students in the UTeach-Natural Sciences program who have earned a passing score on the preliminary portfolio. Foundations of project-based, case-based, and problem-based learning environments; principles of project-based curriculum development in mathematics and science education; classroom management and organization of project-based learning classrooms. Three lecture hours a week for one semester with additional fieldwork hours to be arranged. Only one of the following may be counted: Curriculum and Instruction 365E, 371 (Topic 22: Project-Based Instruction), UTeach-Natural Sciences 360. Prerequisite: A University grade point average of at least 2.50, and Curriculum and Instruction 365D or UTeach-Natural Sciences 355 with a grade of at least C-.

#### **UTS 170. Student Teaching Seminar.**

Restricted to students in the UTeach-Natural Sciences program who have earned a passing score on the preliminary portfolio. Discussions include student teaching experiences, contemporary critical issues in education, and preparation for the state certification exam. One class hour a week for one semester. Chemistry 107 (Topic: Special Topics Seminar) and UTeach-Natural Sciences 170 may not both be counted. Prerequisite: A University grade point average of at least 2.50, and credit or registration for Curriculum and Instruction 650S.

#### **UTS 675. Student Teaching for Secondary and Middle Grades.**

Closely supervised field coursework in a cooperating school. Experience includes carrying out the duties of a secondary or middle

grades teacher. Twenty hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: A University grade point average of at least 2.50, approval of the preliminary portfolio by the College of Natural Sciences UTeach Program, consent of the UTeach adviser in the College of Natural Sciences, and concurrent enrollment in UTeach-Natural Sciences 170.



# School of Nursing

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Alexa K. Stuijbergen, PhD, RN, *Dean*

Sharon D. Horner, PhD, RN, *Associate Dean, Research*

Gayle M. Timmerman, PhD, RN, *Associate Dean, Academic Affairs*

Gayle J. Acton, PhD, RN, *Assistant Dean, Graduate Programs*

Linda J. Carpenter, PhD, RN, *Assistant Dean, Student Affairs*

Margaret K. Hill, MA, MDiv, *Assistant Dean, Administration*

<http://www.utexas.edu/nursing/>

## General Information

### Mission

The purpose of the School of Nursing is to achieve excellence in undergraduate and graduate education, research, public service, and to advance the missions of the University of Texas at Austin through

1. Preparing students at the baccalaureate level to assume roles in professional nursing practice.
2. Preparing students at the graduate level to assume roles in advanced nursing practice, public health, administration, education, and research.
3. Promoting excellence in nursing scholarship.
4. Advancing the health of the public through developing and disseminating new knowledge about health, health care, and health care delivery through scholarly inquiry.
5. Providing consultation, health care programs, and health care services in response to emerging and urgent public health needs.

### History

The University of Texas School of Nursing, established in Galveston in 1890 as the John Sealy Hospital Training School for Nurses, is one of the oldest schools of nursing in the Southwest. In 1896 it was transferred to the University of Texas and became the School of Nursing, a division of the Medical Branch, with the diploma granted by the University. In addition to the diploma course, a curriculum leading to the degree of Bachelor of Science in Nursing was established in 1923 in cooperation with the College of Arts and Sciences of the Main University in Austin. In 1932 the School of Nursing was renamed the John Sealy College of Nursing. The degree program was transferred to the college in 1943.

With the financial support of the Texas Graduate Nursing Association, graduate courses in nursing were first offered in 1930 in the Department of Physical and Health Education at the Main University. In 1940 a complete curriculum was established leading to the degree of Bachelor of Science in Nursing Education. In 1945 the curriculum was transferred to the Medical Branch administration, bringing the John Sealy College of Nursing and the new Department of Nursing Education together to form the School of Nursing with its own dean. In 1949, a curriculum leading to the degree of Bachelor of Science in Nursing was established for graduates of diploma programs. The last class of students enrolled in the diploma program was admitted to the School of Nursing in 1957; since that time the school has offered a single program leading to the Bachelor of Science in Nursing.

Funding from the W. K. Kellogg Foundation provided for a program leading to the Master of Science in Nursing with a major in nursing administration, first offered in 1952. Participating in the program of the

Southern Regional Education Board for graduate education in nursing, the School of Nursing offered additional specialization in 1955. At that time the name of the school was changed to the University of Texas Medical Branch School of Nursing.

In the fall of 1960, the University of Texas at Austin became an extension campus of the School of Nursing, which was still located in Galveston, and nursing courses were offered on the Austin campus for the first time. The School of Nursing was reorganized in 1967 as The University of Texas Nursing School (System-wide) and administrative offices were moved to Austin. The school was renamed The University of Texas System School of Nursing in 1972. Junior- and senior-level nursing courses were offered in Austin, El Paso, Fort Worth, Galveston, Houston, and San Antonio.

On March 26, 1976, the Board of Regents of The University of Texas System voted to reorganize the schools of nursing in the system and to place each school under the administration of the president of the health science center or academic institution nearest it. On September 1, 1976, the School of Nursing at Austin became a part of the University of Texas at Austin.

A program leading to the Doctor of Philosophy degree in nursing was initiated in 1974. Nursing faculty members conduct research on a wide variety of topics. Since 2002, the School of Nursing has been ranked among the top institutions in research funding received from the National Institutes of Health.

### Facilities

The 110,008-square-foot, five-story Nursing School building houses administrative, faculty, staff, and research offices, as well as large and small classrooms and seminar and conference rooms. Also located in the building are the Cain Center for Nursing Research, the St. David's Center for Health Promotion and Disease Prevention Research in Underserved Populations, and the School of Nursing Learning Center, with an audiovisual library and a staff who provide technical assistance for clinical simulation, instructional design, and production.

Learning experiences in the health field are numerous and varied. The School of Nursing has ongoing clinical placement agreements with more than two hundred agencies. These include the Austin State Hospital, University Medical Center at Brackenridge, St. David's Medical Center, Seton Medical Center Austin, and Seton Shoal Creek Hospital. Other community settings used for student field experiences include nursing homes, neighborhood health centers, day-care centers, state and local health departments, physicians' offices, and clinics, including our Family Wellness Center, located in the University's Development Building, and our Children's Wellness Center, located in Del Valle.

### Financial Assistance Available through the School

Application forms for the following scholarships are available from the University Office of Student Financial Services and from the School of Nursing, 1700 Red River Street, Austin TX 78701-1499. The School of Nursing Scholarship Committee selects the recipients for nursing scholarships.

### Endowed Scholarships

The **Rita Willner Atlas Endowed Presidential Scholarship** provides support for undergraduate and graduate students. At the donor's

request, recipients of the awards are designated Rita Willner Atlas Scholars or Rita Willner Atlas Fellows.

The **Jerry N. Blaylock, RN, EdD, FAAN, Endowed Scholarship in Nursing** provides support to an upper division undergraduate student with a GPA of at least 3.5, who is a U.S. citizen or permanent resident. Donor's strong preference is that the recipient be a graduate of a Texas high school or has resided in Texas.

The **Betty J. Bomar Endowed Presidential Scholarship in Nursing** provides scholarship support to an outstanding student pursuing a degree in nursing and a career in providing quality health care. Financial need is a priority in selecting the recipient.

The **Boudreaux Endowed Scholarship in Nursing** provides support for undergraduate students with financial need.

The **Dr. Louis Edward and Virginia Steele Brenz Scholarship** provides support to graduate and undergraduate students.

The **Edith Blanche Jennings Burns, RN, Endowed Scholarship in Nursing** provides support to a full-time or part-time undergraduate or graduate student. The recipient must show excellent promise for a career in nursing and must have a grade point average of at least 2.50 if he or she has been a college or university student. Preference is given first to graduates of Moran High School, Shackelford County, Texas, and then to South Carolina residents, with preference to residents of Lancaster County. If such a recipient cannot be found, a resident of Travis County, Texas, who also graduated from a Travis County high school, is preferred. Financial need is considered.

The **Carol Diane Cave Memorial Endowed Presidential Scholarship in Nursing** is awarded annually to an undergraduate student pursuing a career in nursing. The student must be a Texas resident in the professional nursing sequence and must maintain a grade point average of at least 3.30.

The **Hilda B. Cavell Memorial Endowed Scholarship in Nursing** provides support for undergraduate and graduate nursing students who commit to the service of public health and who demonstrate financial need.

The **Joe and Tana Christie Endowed Presidential Scholarship in Nursing** is awarded annually to an outstanding upper-division or graduate student pursuing a degree in nursing and a career in providing quality health care outside a hospital setting for people with AIDS or other terminal illnesses. The recipient must have a grade point average of at least 3.50.

The **Steven and Alexandra Cocavessis Endowed Scholarship in Nursing** provides support for undergraduate students in the School of Nursing. Preference is given to students who exhibit financial need and demonstrate academic merit.

The **Fred J. and Jann Curry Endowed Scholarship** provides awards to deserving nursing students.

The **Mitzi I. Nuhn Dreher Endowed Presidential Scholarship** provides an award to a full-time undergraduate or graduate student. Preference is given to students who participate in a broad range of extracurricular activities or professional nursing organizations.

The **Endowment for Excellence** provides scholarship support to graduate nursing students, with preference given to those planning to pursue a career in cardiovascular study and research.

The **School of Nursing Faculty-Staff Endowed Presidential Scholarship** is awarded to a full-time undergraduate or graduate student. Preference is given to residents of Texas. The award is made to a nursing student who has shown academic achievement by maintaining a 3.00 or better grade point average, who has shown interest in the community through a record of community involvement, and who has shown a special dedication to nursing by participating in nursing organizations.

The **Eugene R. Fant Endowed Scholarship Fund** provides scholarships to nursing and pre-nursing students with financial need.

The **Girling Health Care Undergraduate Scholarship in Nursing** is awarded to undergraduate students in the RN-BSN program with an interest in home health nursing.

The **Kathryn Gurley Scholarship Endowment** provides scholarships for students at all levels. There is no grade point average requirement.

The **Jewel R. Hagan Endowed Scholarship in Nursing** provides undergraduate scholarships for students in the School of Nursing, with priority given to those students enrolled in the ADN to BSN program with high academic achievement. It is the donor's preference that the recipients be U.S. military veterans who are parents of dependent children.

The **Alda R. Hilliard, RN, Memorial Endowed Presidential Scholarship in Nursing** is awarded to an undergraduate or graduate student pursuing a degree in nursing and a career in providing quality health care.

The **Jens Jacobsen Memorial Endowed Scholarship in Nursing** provides support for nursing students. Financial need and merit are strong considerations in the selection of recipients; preference is given to students from disadvantaged backgrounds.

The **Lee Hage and Joseph D. Jamail Endowed Scholarship in Nursing** provides support to students of average academic merit who show promise of success in their chosen field and who demonstrate evidence of financial need.

The **Mary Gibbs Jones Endowed Presidential Scholarship in Nursing** provides awards to full-time nursing students. Financial need is emphasized in the selection of recipients.

The **Kristi Kana Endowed Presidential Scholarship in Nursing** is awarded to a full-time undergraduate or graduate nursing student in good academic standing with demonstrated financial need. Preference is given to students involved in community activities for the good of others.

The **Dorothy C. Luther Scholarship in Nursing** provides support to deserving graduate students in the School of Nursing.

The **Lillie S. Matthews Endowed Scholarship** provides scholarships for students in the School of Nursing.

The **Lucy May Maxey Scholarship Fund in Nursing** provides scholarships to nursing students with an interest in the treatment of cancer.

The **Nancy Francis and William Arnold McMinn Endowed Presidential Scholarship** is awarded to an undergraduate or graduate student pursuing a degree in nursing and a career in providing quality health care. The student must be a Texas resident in the professional

nursing sequence and must maintain a grade point average of at least 3.30.

The **Rose M. Morris Memorial Endowed Scholarship in Nursing** provides scholarships to undergraduate, graduate, or doctoral students in the School of Nursing.

The **Florence Nightingale Memorial Scholarship** provides scholarships to deserving undergraduate students in the School of Nursing.

The **Carol Miller Norwood Endowed Presidential Scholarship** is awarded to a full-time undergraduate or graduate student pursuing a degree in nursing. The recipient must demonstrate financial need, participation in extracurricular activities, and academic motivation.

The **Endowed Fellowship in Nursing Systems** awards fellowships to deserving graduate students enrolled in the nursing systems concentration.

The **PCA Health Plans Endowed Presidential Scholarship** provides awards to incoming freshmen on the basis of academic merit. Preference is given to students who are graduates of the Austin Independent School District and then to students from the counties served by PCA Health Plans. Extracurricular activities and interests are also considered.

The **S. Allison Starr Pendergras Endowed Memorial Scholarship in Nursing** is awarded to an undergraduate and a graduate student with a grade point average of at least 2.50. Financial need is a priority in selecting the recipients.

The **Ella Kate and Wallace Ralston Nursing Students Scholarship Fund** provides assistance for a number of students each year.

The **Louis W. Rase and Sophie Braun Rase Nursing Scholarship Fund** provides an award annually to a nursing student who demonstrates outstanding scholarship. The recipient is chosen on the basis of grade point average and must rank in the top 10 percent of his or her class.

The **Alice R. Redland Endowed Presidential Scholarship in Nursing** is awarded to a full-time undergraduate or graduate student planning to pursue a career in gerontological nursing.

The **Cynthia Lubocki Riley Memorial Scholarship in Nursing** provides scholarships to deserving undergraduate students who demonstrate the greatest financial need.

The **Dolores and Arthur Sands Endowed Presidential Scholarship in Nursing** provides scholarship support for promising graduate students pursuing a degree in nursing and a career in providing quality health care. Financial need is a priority in the selection of the recipient.

The **M. Elizabeth Sands, MD, and Arthur T. Sands, MD, PhD, Endowed Scholarship in Nursing** provides an award to a graduate or undergraduate nursing student planning to pursue a career in oncology.

The **Santa Rosa Children's Hospital Scholarship Fund in Memory of Taylor Andrew Marceau** provides an award to a nursing student who has demonstrated financial need, exemplary moral character, and good academic standing. Preference is given to students who intend to practice in the field of pediatric nursing. At the donor's request, recipients are designated Santa Rosa Scholars.

The **Shivers Cancer Foundation Endowed Excellence Fund in Oncology Nursing** provides awards to students focused on the care of cancer patients.

The **Susanne Spencer Skaggs Endowed Scholarship in Nursing** provides support to graduate and undergraduate nursing students.

The **Leila Tannous Memorial Endowed Scholarship** recognizes and supports outstanding graduate or undergraduate students pursuing a degree in nursing and a career in providing quality health care.

The **Texas Graduate Nurses Association Scholarship** provides awards to registered nurses, either undergraduates in public health nursing or graduate students.

The **Travis County Medical Auxiliary and Society Endowed Presidential Scholarship in Nursing** is awarded to a full-time junior or senior with a grade point average of at least 3.30 and with excellent promise for a career in nursing. Preference is given to Travis County high school graduates.

The **Margaretta Turpin Endowed Scholarship in Nursing** provides scholarship assistance to outstanding undergraduate students pursuing a degree in nursing and a career providing quality health care. Special consideration is given to students pursuing the study of geriatric care.

The **Carlo and Angeline Visco Endowed Scholarship** is awarded to a promising student pursuing a degree in nursing and a career in providing quality health care. The recipient must be a full-time student with a grade point average of at least 3.00.

The **Dusky Chionsini Waters Endowed Scholarship in Nursing** provides support for junior- and senior-level nursing students who do not already hold a professional licensure in nursing. Preference is given to students from educationally and financially disadvantaged backgrounds.

The **Marlene H. Weitzel, PhD, RN, Endowed Student Scholarship in Nursing** recognizes and supports promising students pursuing a degree in nursing and a career in providing quality health care. Financial need is a priority in the selection of the recipient.

The **Norma White, RN, Endowed Scholarship** provides support to a full-time undergraduate or graduate student who has a grade point average of at least 2.50. Financial need is a priority in selecting the recipient.

The **Lola B. Wright Foundation Centennial Scholarship** enables the School of Nursing to assist several students each year with individual financial aid.

The **Carolyn J. and John H. Young Endowed Presidential Fellowship in Nursing** provides support to an outstanding graduate student identified by the School of Nursing as having outstanding potential to contribute to the field of nursing.

## Nonendowed Scholarships

Other scholarships are frequently available through the generosity of groups such as the University of Texas at Austin School of Nursing Alumni Network, area civic organizations, and several nursing student organizations. Information is available in the Student Affairs Office each semester.

## Other Financial Aid Programs

### ROTC Nursing Scholarships

To be eligible for an ROTC scholarship, an applicant must be a United States citizen and must be less than twenty-five years old on June 30 of the calendar year during which commissioning is scheduled.

**Air Force ROTC Nursing Scholarships.** These scholarships provide for payment of tuition and fees and for textbooks and a monthly allowance during the school year. For additional information, contact The University of Texas at Austin, Department of Air Force Science, 1 University Station C3600, Austin TX 78712.

**Army ROTC Nursing Scholarships.** These scholarships provide for payment of tuition and fees, a flat rate for textbooks, and a monthly allowance during the school year. Students must attend the Nursing Advanced Camp during the summer between the junior and senior years and work individually with a licensed BSN preceptor. Students may apply to the dean for independent study credit; applications are considered on a case-by-case basis. For additional information, contact The University of Texas at Austin, Department of Military Science, 1 University Station C3606, Austin TX 78712.

**Navy ROTC Nursing Scholarships.** These scholarships provide for payment of tuition and fees and for textbooks and a monthly allowance during the school year. For additional information, contact The University of Texas at Austin, Department of Naval Science, 1 University Station C3604, Austin TX 78712.

### Vocational Rehabilitation

The Texas Department of Assistive and Rehabilitative Services (DARS) offers assistance in payment of tuition to students who have certain disabling conditions, provided their vocational objectives are approved by a DARS counselor. Services are also available to help students with disabilities find or keep employment. More information is available at <http://www.dars.state.tx.us/drs/vr.shtml>.

### Academic Advising

All prenursing and nursing students must come to the School of Nursing before registration each semester for academic advising. Prenursing students are assigned to academic advisers on staff in the Office of Student Affairs. Appointments are recommended and available through an on-line appointment system. Nursing students in the professional sequence are provided group academic advising and one-on-one career advising by nursing faculty members.

### Student Organizations

Undergraduate students, including prenursing students, are eligible for membership in the University of Texas Nursing Students Association. Through the association, nursing students are represented on campus committees and in campus activities involving all students. The local association is affiliated with the Texas Nursing Students' Association and the National Student Nurse Association.

Qualified students in the School of Nursing are also eligible for membership in Epsilon Theta Chapter of Sigma Theta Tau International Honor Society of Nursing.

## Admission and Registration

### Admission

#### Admission to the University

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information* (<http://registrar.utexas.edu/catalogs>).

#### Preprofessional Sequence

Students who wish to major in nursing begin their studies by taking prerequisite course requirements as prenursing majors. In order for students at the University from other majors to change their major to prenursing, they must have a minimum cumulative and science grade point average of 2.75 and be on track towards a timely graduation. During their final semester of preprofessional sequence coursework, they may apply for admission to the professional sequence in nursing.

#### Admission to the Professional Sequence in Nursing

Admission to the School of Nursing upper-division professional sequence is competitive. Students may apply for admission when they are enrolled in the last semester of required prerequisite coursework. The student must have a grade of at least C- in each prerequisite course and a minimum cumulative grade point average of at least 2.75 for courses taken at the University, prerequisite courses, and science courses. Students admitted to the professional sequence usually exceed this minimum requirement significantly, with higher grade point averages in all University courses, in prerequisite courses, and in the science and pharmacology courses in the preprofessional sequence. Students are expected to complete their bachelor's degree in nursing within four years.

The application includes the application form and personal statement, three letters of reference, a transcript from every other college or university the student has attended, and a high school transcript. Admission decisions are based on (1) the strength of the student's academic background, with special consideration given to his or her grade point average in the required natural science courses and in courses taken at the University; (2) the number of hours the student has taken at the University; (3) the number of repeated courses; (4) the student's achievements and accomplishments, with emphasis on volunteer work and activities in health care; and (5) being on track towards a timely graduation.

### External Transfer

All students who wish to transfer to the University from another institution must apply to the University Office of Admissions as described in *General Information* (<http://registrar.utexas.edu/catalogs>).

#### Preprofessional Sequence

A transfer student who plans to enter the preprofessional sequence in nursing should consult an academic adviser in the School of Nursing as early as possible for advising and transcript review. Students are encouraged to consult an adviser before applying for admission to the University.



## Professional Sequence

A student who wishes to transfer into the sequence from another nursing school must make an appointment with the School of Nursing Office of Student Affairs for academic advising and transcript review. Students are encouraged to consult an adviser in the School of Nursing before applying for admission to the University. In addition to meeting the regular University admission requirements, the student must apply for admission to the School of Nursing. He or she must submit an official transcript from each institution attended, letters of recommendation from faculty members at the previous nursing school, and course information for all completed nursing courses.

Transfer students must meet the same requirements as University students seeking admission to the professional sequence; however, they are considered for admission to the School of Nursing only if they are admitted to the University.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule* (<http://registrar.utexas.edu/schedules>), published at <http://registrar.utexas.edu/schedules/> before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

## Academic Policies and Procedures

### Student Responsibility

1. It is the student's responsibility to be informed of general and special notices posted in the School of Nursing building and on the listserv.
2. The student must make arrangements for the completion of all work, including makeup examinations and requirements for removal of conditional and incomplete grades.
3. Because the curriculum is demanding, students are urged to limit work hours while in the program. A student's combined employment and semester-hour load (including clinical laboratory hours) should not exceed forty hours a week in either a long-session semester or a summer term. During the final month of the last semester of the program, students are enrolled in a full-time preceptorship and are unable to have outside employment.
4. Students may be employed in area hospitals and clinics as nursing assistants, performing functions for which they have been trained by the employing institution and for which the institution has a clearly discernible policy, either in writing or by precedent, defining the scope of these functions. It is illegal for unlicensed students to practice as professional nurses.

Students should be aware that (1) the School of Nursing assumes no responsibility for their activities as employees of an agency; (2) they are personally responsible and liable for any activity they participate in while employed; (3) professional liability insurance purchased by students is valid only in their student role, not in their employment role; (4) individuals who practice illegally may jeopardize their future careers, since those

who are convicted of violating the Nurse Practice Act may not be eligible to write state board examinations and subsequently to be licensed.

Students employed in an agency are personally and professionally responsible for engaging only in those activities that fall within their job descriptions as nonlicensed workers (such as aides). They have a responsibility to refuse to participate in activities that they have not been legally licensed to perform, such as giving medications and assuming total responsibility for a nursing unit.

5. Students should be familiar with the Student Standards of Conduct given in subchapter 11–800, Appendix C, “Institutional Rules on Student Services and Activities,” *General Information* (<http://registrar.utexas.edu/catalogs>), as well as the University's Honor Code and the School of Nursing's Code of Honor. Upon admission to the professional sequence, students are expected to read and sign a pledge to abide by the Code of Honor.

## School of Nursing Honor Code

The profession of nursing has a legacy of public respect and trust. We provide specialized care for the health needs of individuals and the community with integrity, honesty, compassion, and state-of-the-art knowledge and skills. Learning and practicing responsible and ethical professional behavior is a vital part of professional education.

As a student in the University of Texas at Austin's School of Nursing, I pledge myself to be honest in all of my student activities including, but not limited to, all of my scholastic work and interactions with patients, members of the community, faculty, and peers. Furthermore, I will not use any substance prior to or during my interaction with patients that could alter my judgment or ability to render safe care: this includes but is not limited to any use of alcohol, illegal drugs, and prescription or over-the-counter drugs that may impair my mental and/or physical abilities required to perform safe patient care. I will disclose to my instructor any violations of the above standards of conduct.

## Standards of Nursing Performance and Progress

Patient safety is a critical element in every clinical course. Clinical errors related to patient care, including those intercepted by the faculty, may interfere with a student's progression in the course and in the program. The standards of performance are described in course syllabi and clinical evaluation tools for clinical practicum courses.

A student must earn a grade of at least C in each nursing course for the course to be counted toward degree requirements. Concurrent or sequential enrollment is required as stated in each course description.

If the student is not on scholastic probation at the University, permission may be granted to repeat a required nursing course in which he or she failed to earn a grade of C or better. To receive credit, the student must repeat the course at the University of Texas at Austin School of Nursing. The semester in which a course is repeated is at the discretion of the dean and is dependent on the space available.

A student may repeat a nursing course only once. If the student does not earn a grade of at least C upon repeating the course, he or she cannot continue in the School of Nursing. If, while repeating the course, the student drops the course or withdraws from the University

at a time when the student's performance in the course is considered to be inferior to that required for a grade of C, he or she may not reenroll in the course or continue in the School of Nursing.

No more than two nursing courses may be repeated.

A student may not repeat for credit a course in which a grade of C or better was awarded.

As a prerequisite to medication administration in clinical nursing courses, students are required to pass a medications and calculations test with a grade of at least 90.

## Compliance Requirements for Clinical Courses

Students must provide documentation confirming completion of compliance requirements prior to participating in clinical nursing courses. Log in to the School of Nursing Intranet Site (<http://www.utexas.edu/nursing/current>) for more information.

## Medical Clearance Requirements

Clinical experiences for nursing students are provided in hospitals and other health care agencies with which the School of Nursing is affiliated. A number of these facilities require that nursing students assigned to them have evidence of immunity to certain diseases. Students must provide the School of Nursing with evidence of compliance with immunization requirements before they begin upper-division coursework.

## Criminal Background Checks

Students are required to submit to criminal background checks before enrolling in the upper-division sequence. Information about the process is available on the School of Nursing Web site. Students with concerns about eligibility are urged to seek official determination from the Texas Board of Nursing at <http://www.bon.state.tx.us/>. Further, we urge students with concerns to seek the background check six months in advance of beginning clinical courses to allow sufficient time for investigation and Texas Board of Nursing approval.

## Employment Background Check

Agencies in which nursing students are placed for clinical work may require an employment background check. Directions to complete this requirement are on the School of Nursing Web site.

## Drug Screen

Clinical agencies may require a drug screen to be completed prior to participating in patient care. Students will be notified during advising of this additional compliance requirement.

## CPR and First Aid Requirements

Current certification in cardiopulmonary resuscitation and first aid are required for participation in clinical nursing courses. The CPR course must include training in infant, child, adult, one-person, two-person, and obstructed airway resuscitation. The basic first aid certification must be acquired from the American Heart Association (Heartsaver First Aid) or from a local emergency medical services agency (National Safety Council First Aid). Students must provide the School of Nursing with evidence of current certification before they begin upper-division coursework. Students who are registered nurses are not required

to provide evidence of first aid certification before beginning upper-division coursework.

## Professional Liability Insurance

Professional liability insurance is required of all students enrolled in the professional sequence in the School of Nursing. Each student must pay the insurance premium at the Office of Student Affairs before he or she begins upper-division coursework. All student policies expire on the date of graduation.

## Training Modules

All students must complete the following modules on the School of Nursing Intranet Site (<http://www.utexas.edu/nursing/current>) before participating in clinical nursing coursework: online orientation, facilities training, and training on the Health Insurance Portability and Accountability Act (HIPAA).

## Health and Hospitalization Insurance

Students are strongly encouraged to purchase health insurance. The cost of personal health care, including care required as the result of clinical practicum experiences, is not covered by either the University, the School of Nursing, or clinical agencies. Information about low-cost group health insurance is available through University Health Services. The liability insurance students buy as a part of compliance for participating in clinical courses does not cover health care expenses.

## Uniforms and Other Expenses

Students must purchase uniforms, shoes, name badges, and other supplies before taking the first clinical nursing course. Specific requirements and information about suggested equipment are distributed before the beginning of the first semester of the professional sequence.

## Transportation

Upper-division clinical courses require students to go to various clinical facilities and community sites at varied hours. Students must have their own transportation.

## Honors

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

### Nursing Honors Program

The Nursing Honors Program is designed to enhance the educational experience of high-achieving undergraduate nursing majors by focusing on the development of scholarship. Students must apply to this competitive honors program, which begins in the sophomore year. Admission to the program requires approval of the Honors Program

Committee. Acceptance into the honors program confers automatic acceptance into the nursing professional sequence, if the student maintains competitive overall and science grade point averages.

Students in the program must complete Nursing 321H, 117H, 264H, and 377H. These courses provide students with enhanced mentorship experiences. Students must complete an honors project with a focus on research, ethics, or leadership. Students are also required to take Nursing 337 Independent Study with their mentor with the focus on their honors project. Nursing 337 may be substituted for Nursing 347, *Specialized Topics in Nursing*, in the degree plan. The statement "Special Honors in Nursing" appears on the transcript of each student who completes the honors program.

## Sigma Theta Tau International

Epsilon Theta Chapter of Sigma Theta Tau International Honor Society of Nursing, was chartered at the University on May 16, 1980. Epsilon Theta Chapter presents scholarly programs each semester; program meetings are open to anyone interested in the program topic. An annual meeting, at which new members are inducted, is held in May.

Membership in Sigma Theta Tau is an honor conferred by active chapters on students who demonstrate academic excellence and on nursing leaders who advance the scientific base of the profession. The society recognizes superior achievement in many areas, facilitates the development of leadership qualities, fosters high professional standards, encourages creative work, and strengthens commitment to the ideals of nursing.

Each year qualified students in the undergraduate and graduate programs may apply for consideration for membership. Invitations to membership are extended to students who are in the top 35 percent of their graduating class. Undergraduates must have a grade point average of at least 3.00; graduate students must have a grade point average of at least 3.50. Qualified community nursing leaders may also be invited to membership. Applications for membership in Epsilon Theta Chapter are available from the Office of Student Affairs in the School of Nursing.

At the induction ceremony each spring, Epsilon Theta Chapter announces its awards, grants, and scholarship recipients. A scholarship is awarded to an upper-division nursing student who has demonstrated leadership potential and outstanding scholastic achievement. The chapter also awards start-up grants annually to Epsilon Theta Chapter members and/or students to fund research projects.

Sigma Theta Tau International, with active chapters on more than four hundred campuses in the United States and in several other countries, offers opportunities for involvement at the chapter, regional, national, and international levels. Programs are offered each year in different parts of the United States under joint sponsorship of chapters and Sigma Theta Tau International. International research congresses are held in cooperation with scholarly nursing organizations in other countries; these programs focus on scholarly topics of relevance to the advancement of nursing knowledge and to the improvement of public health. Research grants are awarded annually by Sigma Theta Tau International as well as by Epsilon Theta and other chapters.

## Credit by Examination

The faculty believes that each educational experience should build on previous achievements to encourage fulfillment of each student's

potential. Therefore, all students and registered nurses are urged to seek advice on arranging a logical sequence of work. The faculty subscribes to the principle that a candidate's competence should be validated and that credit should be awarded on the basis of satisfactory achievement on examinations as well as in the classroom. Twenty-four of the last thirty semester hours of credit presented for the degree must be earned in residence, rather than by examination, correspondence, or transfer.

An examination for credit may not be taken in a course in which the student is enrolled, which the student has completed, or which the student has dropped with either a passing or a failing grade.

University policies regarding credit by examination are given in *General Information* (<http://registrar.utexas.edu/catalogs>).

## Graduation

### Special Requirements of the School

All students must fulfill the General Requirements (p. 18) for graduation. Students in the School of Nursing must also fulfill the following requirements:

1. All University students must have a grade point average of at least 2.00 to graduate. In the School of Nursing, students must also have a grade point average of at least 2.00 in the coursework used to fulfill the upper-division requirement.
2. A candidate must complete the prescribed curriculum and must meet all other requirements of the School of Nursing.
3. A student must supply the School of Nursing with transcripts of courses taken outside the school as the courses are completed.

### Degree Audit

A degree audit is prepared when the student begins the junior year of nursing courses. The student is then notified of the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit is normally done according to the catalog in effect when the student was admitted to the School of Nursing, but the student may choose to have it done according to any catalog under which he or she is eligible to graduate. Rules on graduation under a particular catalog are given in Graduation Under a Particular Catalog (p. 19).

In advising and in registering students, the dean and advisers try to prevent errors. Avoidance of errors is the main purpose of the degree audit, but it remains the responsibility of the student to fulfill all catalog requirements.

### Graduation Application Form

In the long-session semester or summer session in which the degree is to be awarded, the candidate must be registered at the University and must file a Graduation Application Form in the School of Nursing Office of Student Affairs. The form must be filed by the deadline to apply for an undergraduate degree, which is given in the official academic calendar.

## Licensure as a Professional Nurse

Each student seeking licensure as a professional nurse must pass the National Council Licensure Examination (NCLEX). The Texas Board of Nursing, which determines eligibility to take the NCLEX, has identified certain circumstances that may render a candidate ineligible for state licensure as a registered nurse. A student's answers to the following questions may determine eligibility.

1. Have you been convicted, adjudged guilty by a court, plead guilty, no contest or nolo contendere to any crime in any state, territory, or country, whether or not a sentence was imposed, including any pending criminal charges or unresolved arrests (excluding minor traffic violations)? This includes expunged offenses and deferred adjudications with or without prejudice of guilt. Please note that DUIs, DWIs, and PIs must be reported and are not considered minor traffic violations. (One-time minor in possession (MIP) or minor in consumption (MIC) violations do not need to be disclosed. However, if you have two or more MIPs or MICs, you must answer "yes" to this question.)
2. Do you have any criminal charges pending, including unresolved arrests?
3. Has any licensing authority refused to issue you a license or ever revoked, annulled, canceled, accepted surrender of, suspended, placed on probation, or refused to renew a professional license, certificate, or multistate privilege held by you now or previously, or ever fined, censured, reprimanded, or otherwise disciplined you?
4. Within the past five years have you been addicted to and/or treated for use of alcohol or any other drug?
5. Within the past five years have you been diagnosed with, treated, or hospitalized for schizophrenia and/or psychotic disorders, bipolar disorder, paranoid personality disorder, antisocial personality disorder, or borderline personality disorder?

Criminal background checks, including fingerprinting, are a required part of the application process for licensure in Texas. Students who have concerns about this requirement are encouraged to seek confirmation of their eligibility for licensure prior to considering a career in nursing. Consult the Texas Board of Nursing Web site at <http://www.bon.state.tx.us/> or call (512) 305-7400 for further information.

## Degrees and Programs

### Programs in the School of Nursing

The School of Nursing offers an undergraduate program leading to the degree of Bachelor of Science in Nursing and graduate programs leading to the Master of Science in Nursing degree and the Doctor of Philosophy degree with a major in nursing. The undergraduate program is designed for students who wish to enter the profession of nursing. Students who have earned an associate's degree or a diploma in nursing and wish to obtain the baccalaureate degree may apply to the accelerated track, the RN-BSN program. The master's and doctoral degree programs are designed to prepare professionals for advanced nursing practice and research in nursing.

The baccalaureate program is accredited by the Commission on Collegiate Nursing Education (CCNE) and the Texas Board of Nursing.

## Objectives of the Bachelor's Degree Program

The graduate of the baccalaureate program in nursing is expected to

1. Use critical thinking to integrate knowledge from nursing, biological and behavioral sciences, and the humanities in planning, implementing, and evaluating nursing care.
2. Use critical thinking and clinical judgment within a problem-solving process to meet the health care needs of individuals, families, aggregates, and communities in a variety of settings.
3. Accept responsibility and accountability for one's own actions as a health care professional.
4. Participate in the delivery of health care through case management, interdisciplinary collaboration, delegation, supervision, coordination, and consultation.
5. Participate in nursing and interdisciplinary efforts to improve the delivery of safe, high-quality health care to diverse individuals, families, aggregates, and communities.
6. Demonstrate core professional values to complement continued personal and professional growth.
7. Practice nursing according to professional and ethical standards.
8. Critically appraise and apply research findings to demonstrate evidence-based nursing practice.
9. Examine health policy and its effects on individuals, families, aggregates, communities, and health agencies.
10. Integrate the appropriate use of information and health care technology in nursing practice, administration, education, and research.
11. Utilize leadership skills to advance the profession of nursing and promote continuous improvement of the health care delivery system.

## Applicability of Certain Courses

### ROTC Courses

The dean has the authority to substitute an equivalent air force science, military science, or naval science course or courses for a course or courses prescribed by the School of Nursing; core curriculum courses cannot be substituted. The dean can also make adjustments to compensate for any differences in semester hour value. The total number of semester hours required for the degree remains unchanged.

### Correspondence and Extension Courses

Credit earned by correspondence or extension from the University or elsewhere will be counted toward a Bachelor of Science in Nursing degree if approved by either the assistant dean for student affairs or the assistant dean for undergraduate programs. A student planning to meet preprofessional course requirements with correspondence or extension courses should consult the Office of Student Affairs to ensure enrollment in appropriate courses. Credit for professional sequence courses may not be earned by correspondence or extension.

## Bachelor of Science in Nursing

This program consists of 126 to 127 semester hours of coursework: sixty-five to sixty-six hours of prerequisite courses (the preprofessional



sequence) taken at the University of Texas at Austin or another accredited college or university, followed by sixty-one hours of upper-division nursing courses (the professional sequence) taken at the University of Texas at Austin School of Nursing. Upon completion of the program, students are awarded the Bachelor of Science in Nursing degree and have fulfilled the prescribed course of study and clinical practice required to take the National Council Licensure Examination (NCLEX) for licensure as a registered nurse.

## Foreign Language Requirement

Students may fulfill the foreign language component of the University's basic education requirements by completing two years of a single foreign language in high school, by earning an appropriate score on one of the placement examinations administered by the University, or by completing two semesters of college coursework in a single foreign language in addition to the degree requirements given below. If the foreign language requirement will be fulfilled by transfer credit, credit by examination, or extension or correspondence courses, it must be fulfilled before the first semester of the student's senior year. Nursing 354 may not be counted toward the foreign language requirement. For students who take college coursework to complete the foreign language requirement, Spanish is recommended.

## Flag Requirements

In the process of fulfilling the requirements of the preprofessional sequence (including the core curriculum) and the professional sequence, students must earn credit for one flag in ethics and leadership, one flag in global cultures, one flag in independent inquiry, one flag in quantitative reasoning, and three flags in writing. Courses used to fulfill the writing flag requirement may be used simultaneously to fulfill other requirements.

Students are also required to earn one flag in cultural diversity in the United States and are advised to earn credit for this flag as part of the coursework used to satisfy the first-year signature course, American history, or visual and performing arts requirements of the core curriculum. Courses with flags are identified in the *Course Schedule*, published at <http://registrar.utexas.edu/schedules/>.

## Preprofessional Sequence

Students must complete the sixty-five or sixty-six semester hours of coursework (preprofessional sequence) listed below. Completion usually requires two and one-half academic years (or four semesters and one summer session). All courses must be completed before the student enrolls in upper-division courses in nursing.

All students must complete the University's Core Curriculum (p. 22). In some cases, a course that is required for the Bachelor of Science in Nursing may also be used to fulfill a requirement of the core curriculum; these courses are identified below.

Course	Sem Hrs
<b>Core Curriculum</b>	
Elements of the Core Curriculum (p. 22) not satisfied by other requirements of the Bachelor of Science in Nursing	24
<b>Natural Sciences</b>	
Physiology and functional anatomy: Biology 446L, 365S, 165U	8

Biology: Biology 311C, 326M (together may be used to fulfill the science and technology, part I, requirement of the core curriculum)	6
Chemistry: Chemistry 301 (may also be used to fulfill the science and technology, part II, requirement of the core curriculum)	3
Introductory statistics: Statistics and Scientific Computation 302 (may also be used to fulfill the mathematics requirement of the core curriculum; carries a quantitative reasoning flag)	3
Nutrition 306	3
<b>Liberal Arts</b>	
Introductory psychology: Psychology 301 (may also be used to fulfill the social and behavioral sciences requirement of the core curriculum)	3
<b>Nursing</b>	
Nursing 309, <i>Global Health</i> (carries a global cultures flag)	3
Nursing 310, <i>Communication in Health Care Settings</i>	3
Nursing 321, <i>Ethics of Health Care</i> (carries both a writing flag and an ethics and leadership flag)	3
<b>Other Courses</b>	
Growth and development: Human Development and Family Sciences 313 and 113L, or Psychology 304	3 or 4
Introductory pharmacology: Pharmacy 338	3
<b>Total 65 or 66</b>	

## Professional Sequence

The final sixty-one semester hours of coursework in nursing are completed after the student has achieved upper-division standing and has been admitted into the School of Nursing professional sequence. These hours consist of the courses listed below and Nursing 347, *Specialized Topics in Nursing*, which many students choose to take in the summer. In order to meet prerequisites, students must take most of the courses in the professional sequence in the indicated semester. Courses that may be taken at any point in the professional sequence are Nursing 323, *Genetics in Health Care*, Nursing 347, *Specialized Topics in Nursing*, and Nursing 354, *Spanish for Health Care Professionals*.

Courses	Sem Hrs
<b>First Semester</b>	
Nursing 224, <i>Health Assessment Skills</i>	2
Nursing 325, <i>Adult Health Nursing I</i>	3
Nursing 325P, <i>Adult Health Nursing I (Practicum)</i>	3
Nursing 264, <i>Nursing Research</i>	2
Nursing 227, <i>Conceptual Bases of Aging</i>	2
Nursing 127P, <i>Clinical Nursing Skills I (Practicum)</i>	1
Nursing 354, <i>Spanish for Health Care Professionals</i>	3
<b>Total 16</b>	
<b>Second Semester</b>	
Nursing 455, <i>Adult Health Nursing II</i>	4
Nursing 355P, <i>Adult Health Nursing II (Practicum)</i>	3
Nursing 356, <i>Mental Health Nursing across the Life Span</i>	3
Nursing 356P, <i>Problems in Mental Health Nursing (Practicum)</i>	3
Nursing 157P, <i>Clinical Nursing Skills II Practicum</i>	1

	<b>Total 14</b>
<b>Third Semester</b>	
Nursing 323, <i>Genetics in Health Care</i>	3
Nursing 265, <i>Nursing Care of Childbearing Families</i>	2
Nursing 365P, <i>Nursing Care of Childbearing Families Practicum</i>	3
Nursing 266, <i>Nursing Care of Children and Their Families</i>	2
Nursing 366P, <i>Nursing Care of Children and Their Families Practicum</i>	3
Nursing 278, <i>Contemporary Nursing Practice</i>	2
	<b>Total 15</b>
<b>Fourth Semester</b>	
Nursing 275, <i>Public Health Nursing</i>	2
Nursing 375P, <i>Public Health Nursing Practicum</i>	3
Nursing 377P, <i>Clinical Care Management Practicum</i>	3
Nursing 377, <i>Leadership and Management of Nursing Care</i>	3
Nursing 279P, <i>Capstone Preceptorship</i>	2
	<b>Total 13</b>

## BSN for Registered Nurses

The Accelerated Track, designed for registered nurses with associate's degrees or diplomas in nursing, builds on individuals' backgrounds while offering preparation in areas such as public health nursing, genetics, decision making, leadership, and management. The BSN degree provides the basis for graduate preparation at the MSN and PhD levels.

Students should call the RN-BSN/MSN adviser at (512) 471-8246 for an appointment before registering for prerequisite courses and for help in planning a program of study.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://catalog.utexas.edu/general-information>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Nursing: N

### Lower-Division Courses

#### N 107, 207, 307. Topics in Nursing.

One, two, or three lecture hours a week for one semester, with one discussion hour a week if required by the topic. May be repeated for

credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

#### Topic 1: Women's Reproductive Health for Nonscience

**Majors.** Nursing 307 (Topic 1) is same as Sociology 308 (Topic 2: Women's Reproductive Health for Nonscience Majors) and Women's and Gender Studies 301 (Topic 7: Women's Reproductive Health for Nonscience Majors). Overview of contemporary women's reproductive health issues, with emphasis on historical, physiological, psychosocial, and cultural influences that affect the reproductive health of women during adolescence, the childbearing years, and midlife. Topic 1 is offered as Nursing 307 only. Only one of the following may be counted: Pharmacy 318W, Nursing 307 (Topic 1), Sociology 308 (Topic 2), Women's and Gender Studies 301 (Topic 7). Prerequisite: One year of high school biology, or Biology 301L or 309D or the equivalent.

#### N 309. Global Health.

Overview of global health, with emphasis on the determinants of health, health indicators, human rights, globalization, current socioeconomic factors, health care systems, and public health systems. Three lecture hours a week for one semester.

#### N 310. Communication in Health Care Settings.

Introduction to theories and models of communication in relation to health care; basic factors affecting interpersonal communication in health care settings. Three lecture hours a week for one semester. Required for nursing majors.

#### N 117H. Introduction to Nursing Scholarship: Honors Seminar.

Introduction to the nature of nursing scholarship, along with related research and clinical and educational career opportunities. Topics include leadership, research, and ethics as they relate to nursing. One lecture hour a week for one semester. Prerequisite: Admission to the School of Nursing Honors Program.

#### N 119, 219, 319, 419, 519, 619. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Nursing 119, 219, 319, 419, 519, 619 and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

## Upper-Division Courses

#### N 321. Ethics of Health Care.

Examination of ethical issues of health care and related legal concerns; contradictions, inconsistencies, and competing views that lead to dilemmas in health care. Three lecture hours a week for one semester. Only one of the following may be counted: Nursing 311, 311H, 321, 321H. Prerequisite: Rhetoric and Writing 306.

#### N 321H. Ethics of Health Care: Honors.

Ethical issues in health care and related legal concerns; contradictions, inconsistencies, and competing views that lead to dilemmas in health care. Emphasis on resolving ethical dilemmas through ethical reasoning and ethical obligations in health professional-patient relationships; and just allocation of scarce health care resources. Three lecture hours a week for one semester. Only one of the following

may be counted: Nursing 311, 311H, 321, 321H. Prerequisite: Admission to the School of Nursing Honors Program, or consent of instructor.

### **N 322. Transition to Professional Nursing.**

Restricted to students in the RN-BSN accelerated track. Designed to provide the RN student with a transition into the baccalaureate and professional nursing roles. Explores professional socialization in the work and education settings; develops professional career goals and career plans; and includes discussion of role transition in nursing practice, with attention to expanded and advanced nursing practice roles. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **N 323. Genetics in Health Care.**

The integration of genetic information into nursing practice, including ethical, legal, psychological, and social issues. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **N 224. Health Assessment Skills.**

Discussion, application, and documentation of health assessment skills needed to provide data for health promotion and nursing interventions. One and one-half lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing.

### **N 325. Adult Health Nursing I.**

For nursing majors admitted to the professional sequence. Discussion of the concepts and theories necessary to promote and restore the health of adults with biological problems; related physiological and psychological responses. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **N 325P. Adult Health Nursing I (Practicum).**

For nursing majors admitted to the professional sequence. Application of the concepts and theories necessary to promote and restore health of adults with biological problems; related physiological and psychological responses. Nine laboratory hours a week for one semester. Prerequisite: Upper-division standing and credit or registration for Nursing 325.

### **N 227. Conceptual Bases of Aging.**

An examination of the theories of aging, the developmental tasks of families, and the physical, psychological, social, economic, ethical, legal, and spiritual needs of aging persons. Responsibilities and needs of caregivers. Two lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **N 127P. Clinical Nursing Skills I (Practicum).**

Laboratory instruction and practice in clinical nursing skills. Two laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Concurrent enrollment in Nursing 325P.

### **N 129M, 229M, 329M, 429M, 529M, 629M. International Learning Seminars.**

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Nursing 129M, 229M, 329M, 429M, 529M, 629M and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **N 137, 237, 337. Independent Study.**

Study in a specific area; topic and mode of study are agreed upon by student(s) and instructor. The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: A University grade point average of at least 2.80 and consent of instructor.

### **N 147, 247, 347. Specialized Topics in Nursing.**

The equivalent of one, two, or three lecture hours a week for one semester; some topics require up to thirty-nine hours of fieldwork a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Enrollment in the upper-division sequence. Some topics also require consent of instructor; these are identified in the Course Schedule.

**Topic 1: Informatics in Health Care and Nursing.**

**Topic 2: Acute Care Pediatrics.**

**Topic 3: Cardiovascular Nursing.**

**Topic 4: Childbearing Nursing Elective.**

**Topic 5: Critical Care Nursing.**

**Topic 6: High-Risk Maternity.**

**Topic 7: Pediatrics.**

**Topic 8: Perioperative Nursing.**

**Topic 9: Special Topics in Pediatrics.**

**Topic 10: Child Wellness Center (Practicum).**

**Topic 11: Children with Chronic Illness in the Community.**

**Topic 12: Clinical Nursing Preceptorship.**

**Topic 13: Community-Oriented Ambulatory Nursing.**

**Topic 14: Genetics in Clinical Nursing (Practicum).**

**Topic 15: Home Health Nursing.**

**Topic 16: Pediatrics in the Community.**

**Topic 17: Well Children in the Community.**

### **N 354. Spanish for Health Care Professionals.**

Basic Spanish language skills and phrases related to nursing activities. Three lecture hours a week for one semester. Prerequisite: Upper-division standing or consent of instructor.

### **N 455. Adult Health Nursing II.**

Advanced concepts and theories to promote and restore health of adults with biological problems and related physiological and psychological responses. Four lecture hours a week for one semester. Prerequisite: Nursing 325 and 325P.

### **N 355P. Adult Health Nursing II (Practicum).**

Application of advanced concepts and theories to promote and restore health of adults with biological problems and their related physiological and psychological responses. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 455.

### **N 356. Mental Health Nursing across the Life Span.**

Biological, environmental, cultural, and interpersonal factors predisposing individuals across the life span to mental health problems. The course is organized around the nursing process, as well as multidisciplinary therapeutic modalities, that assist the individual and family to adapt, recover, and grow through these problems. Current relevant research, and the sociocultural, legal, and ethical implications of providing nursing care to the mentally ill. Three lecture hours a week for one semester. Prerequisite: Nursing 224 and 325.

**N 356P. Problems in Mental Health Nursing (Practicum).**

Application of strategies for the care of individuals, groups, and families experiencing mental health problems. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 356.

**N 157P. Clinical Nursing Skills II Practicum.**

Laboratory instruction and practice in clinical nursing skills. Two laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Concurrent enrollment in Nursing 355P.

**N 264. Nursing Research.**

Basic components of the research process; interpreting descriptive and inferential statistics in research. Critical examination of research studies in nursing. Two lecture hours a week for one semester. Nursing 264 and 264H may not both be counted. Prerequisite: Upper-division standing.

**N 264H. Nursing Research: Honors.**

Examination of the research process and methods, along with interpretation of descriptive and inferential statistics in research. Critical examination of research studies in nursing and research skills through participation in a research project. One and one-half lecture hours and one laboratory hour a week for one semester. Nursing 264 and 264H may not both be counted. Prerequisite: Admission to the School of Nursing Honors Program and an introductory statistics course, or consent of instructor.

**N 265. Nursing Care of Childbearing Families.**

Concepts, theories, and processes essential to understanding the health concerns and problems of women and their families during the childbearing years. Two lecture hours a week for one semester. Prerequisite: Nursing 455, 355P, 356, 356P, and 157P.

**N 365P. Nursing Care of Childbearing Families Practicum.**

The application of concepts, theories, and processes pertinent to care of women and their families during the childbearing years. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 265.

**N 266. Nursing Care of Children and Their Families.**

Two lecture hours a week for one semester. Prerequisite: Nursing 455, 355P, 356, 356P, and 157P.

**N 366P. Nursing Care of Children and Their Families Practicum.**

Application of concepts, theories, and developmental processes essential to the health concerns and problems of children, adolescents, and their families. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 266.

**N 275. Public Health Nursing.**

Public health nursing models and the nursing process as they are used to plan for the health of aggregates and communities. Description and analysis of formal and informal community systems and health care delivery systems. Major emphasis on the concepts of community building and collaboration. Two lecture hours a week for one semester. Prerequisite: Nursing 455, 355P, 356, and 356P; or consent of instructor.

**N 375P. Public Health Nursing Practicum.**

Provides opportunities for students to apply public health nursing concepts, theories, and processes to the care of aggregates and the total community. Assigned clinical experiences are designed to develop student skills in the practice of public health nursing. Emphasis is on interdisciplinary health care with at-risk aggregates in the community, and high-risk families and aggregates in the community. Nine laboratory hours a week for one semester. Prerequisite: Credit or registration for Nursing 275.

**N 377. Leadership and Management of Nursing Care.**

Selected concepts and theories of management in the context of the delivery of dynamic nursing care. Use of management concepts in working with a health care team to provide high-quality patient care. Historical development of the health care system, current issues, contemporary trends, standards of professional practice, management and leadership roles, political and cultural influences on health care, and professional career development. Three lecture hours a week for one semester. Nursing 377 and 377H may not both be counted. Prerequisite: Nursing 325 or consent of instructor.

**N 377H. Leadership and Management of Nursing Care: Honors.**

Examination of selected concepts and theories of management and leadership in the context of the delivery of dynamic nursing care. The use of management concepts in working with a health care team to provide high-quality patient care. Current economic, social, and political factors that influence health care. Three lecture hours a week for one semester. Nursing 377 and 377H may not both be counted. Prerequisite: Admission to the School of Nursing Honors Program or consent of instructor.

**N 377P. Clinical Care Management Practicum.**

Application of selected concepts and theories of management in the planning and delivery of health care. Nine laboratory hours a week for one semester. Prerequisite: Nursing 265, 365P, 266, and 366P; and credit or registration for Nursing 377.

**N 278. Contemporary Nursing Practice.**

Designed to evolve the student's professional nursing practice and expand its application in the clinical setting. Provides opportunities for analysis and synthesis of theoretical, evidence-based, and clinical knowledge with emphasis on the awareness and knowledge of contemporary nursing practice. Two lecture hours a week for one semester. Prerequisite: Nursing 264 or consent of instructor.

**N 279P. Capstone Preceptorship.**

Designed to provide students with clinical experiences similar to those that confront newly employed registered nurses. Focuses on the role transformation of students and on clinical competence in communication, collaboration, negotiation, delegation, coordination, and evaluation of interdisciplinary work. Thirty to forty hours a week for three to four weeks for a total of 120 clinical hours. Additional preparation time to assure clinical competence may be required. Offered on the pass/fail basis only. Prerequisite: Nursing 377 and 377P.



# College of Pharmacy

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M. Lynn Crismon, PharmD, *Dean*  
Patrick J. Davis, PhD, *Senior Associate Dean*  
Carlton K. Erickson, PhD, *Associate Dean*  
William McIntyre, PharmD, *Associate Dean*  
Diane B. Ginsburg, MS, *Assistant Dean*  
Jennifer L. Ridings-Myhra, BSPHr, *Assistant Dean*  
Richard E. Wilcox, PhD, *Assistant Dean*  
<http://www.utexas.edu/pharmacy/>

## General Information

### Accreditation

The College of Pharmacy has been a member of the American Association of Colleges of Pharmacy since 1927. The Doctor of Pharmacy degree program is accredited by the Accreditation Council for Pharmacy Education (ACPE); ACPE does not accredit master's and PhD degrees in pharmacy.

### Mission

The University offers the six-year program leading to the Doctor of Pharmacy (PharmD) as the sole entry-level practice degree. This program offers a course of study in the pharmaceutical and clinical sciences designed to provide the state and the nation with pharmacists who are scientifically trained and clinically competent to deliver a full spectrum of pharmaceutical services in all areas of practice. In meeting its teaching obligation, the college provides a curriculum and faculty that offer students an educational experience beyond training solely for the practice of pharmacy.

The profession of pharmacy is evolving rapidly from a role primarily in distribution of medication toward a patient-oriented, pharmaceutical care model. Pharmaceutical care is a process through which a pharmacist interacts with the patient and other health care professionals in the design, implementation, and monitoring of a patient-specific therapeutic plan that will produce the desired therapeutic outcomes. To ensure that graduates have the necessary tools to practice in this complex, patient-oriented environment, the pharmacy curriculum has evolved from traditional discipline-specific coursework to a discipline-integrated approach of disease state management and a case-based, team approach to the design of the patient-specific therapeutic plan.

The professional curriculum is designed to prepare pharmacy graduates to provide patient-oriented pharmaceutical care in a contemporary setting, whether a community pharmacy, an ambulatory clinic, a hospital, or a long-term care facility, as well as to work in the pharmaceutical industry. In addition, the curriculum aims to inculcate an understanding of the basic sciences sufficient to prepare the student for graduate study in the pharmaceutical sciences. These objectives are pursued through a balanced program of study in pharmaceutics, medicinal chemistry, pharmacology, therapeutics, pharmacy administration, social and behavioral sciences, and the humanities, as well as a structured clinical and professional practice experiential program. The holder of a professional degree from the University of Texas at Austin has received an education and training as sophisticated as any available in the health professions.

The College of Pharmacy has conducted a joint PharmD degree program with the University of Texas Health Science Center at San Antonio since 1974. Students who complete their internship courses

at the Health Science Center are considered part of this program and receive a degree awarded jointly by the two institutions.

The college has cooperative programs with the University of Texas at El Paso and the University of Texas - Pan American, and educational affiliations with several other academic health institutions, including Scott & White Hospital in Temple, the University of Texas M. D. Anderson Cancer Center in Houston, the University of Texas Medical Branch at Galveston, and the University of Texas Southwestern Medical Center at Dallas; and with other University of Texas System academic components. The college also has cooperative practice arrangements with medical centers and other health care facilities throughout the state as part of the experiential program.

The college seeks to encourage the belief that education is ongoing and lifelong and that all levels of professional education must form a continuum with professional practice and patient care. To meet this objective, the college provides postgraduate educational programs and develops innovative programs of training through continuing education for the roles pharmacists may be called on to fill as a result of changes in the patterns of delivery of pharmaceutical services.

In addition to the PharmD degree, the University offers the Master of Science in Pharmacy and the Doctor of Philosophy with a major in pharmacy. Both graduate programs offer qualified students the opportunity to complete specialty practice residencies. These programs are described in the *Graduate Catalog*.

### History

For more than a century, the University's College of Pharmacy has provided education and training for men and women as pharmacy practitioners, scientists, professional leaders, and responsible citizens. Eleven students constituted the first class when a school of pharmacy was created in the fall of 1893 at the University of Texas Medical Branch at Galveston. In 1927, the program was reorganized as the College of Pharmacy and moved to the Austin campus. The college shared quarters with other University programs until 1952, when the first pharmacy building was opened. Instruction now takes place in facilities designed for the pharmacy program and located near the center of the Austin campus, and on the campuses of the University of Texas Health Science Center at San Antonio, the University of Texas at El Paso, and the University of Texas - Pan American in Edinburg.

The first undergraduate program consisted of two sessions, each seven months in length. The current PharmD degree program requires six years in preprofessional subjects, biomedical and pharmaceutical sciences, and professional experience courses. Graduate study became available in 1948 with the institution of a Master of Science in Pharmacy degree program. Today programs are also available that lead to the Doctor of Philosophy in the pharmaceutical, administrative, and clinical sciences. More than eight thousand students have graduated from the programs offered by the college; many have achieved state, national, and international prominence in pharmacy or in related health fields.

Academic leadership for pharmaceutical education at the University has been provided by eleven prominent educators, beginning with James Kennedy of San Antonio, who was appointed as a pharmacy professor and director of the Galveston program in 1893. He was succeeded by R. R. D. Cline, who for almost thirty years guided pharmaceutical education in Texas. When the school was moved to Austin in 1927, W. F. Gidley was named the first dean of the college. In 1947, Henry M. Burlage succeeded Professor Gidley as dean. He was succeeded in 1962 by Lee F. Worrell, who served until 1966. Carl C. Albers was acting dean until Joseph B. Sprowls was appointed dean

in 1967. William J. Sheffield became acting dean upon the death of Professor Sprowls in 1971. He was succeeded in 1973 by James T. Doluisio, who served the college for twenty-five years. Steven Leslie served as dean from 1998 until 2007, when M. Lynn Crismon assumed the leadership of the college.

University pharmacy students receive instruction in the basic biomedical sciences, the pharmaceutical sciences, pharmacy administration, and pharmacy practice in state-of-the-art academic and health care facilities. Pharmacy interns expand their professional practice knowledge and skills at clinical education sites in the Austin/Temple/Waco area, El Paso, and the Lower Rio Grande Valley, and at the University of Texas Health Science Center at San Antonio, the University of Texas Southwestern Medical Center at Dallas, the Texas Medical Center in Houston, and the University of Texas Medical Branch at Galveston.

## Facilities

### The Pharmacy Building

In addition to well-equipped classrooms, laboratories, and offices, the Pharmacy Building provides a learning resource computer center and laboratory, a television production laboratory and classrooms, and pharmaceutical technology laboratories with facilities for product development, pilot manufacturing, sterile production and quality control, and stability testing. The University Health Services Pharmacy also serves as a teaching laboratory for second-year pharmacy students while providing comprehensive pharmaceutical services to the student community. Space assigned to the college in the Biomedical Engineering Building and the Dell Pediatric Research Institute expands pharmacology, medicinal chemistry, and pharmaceuticals research space.

### Pharmacy Facilities in San Antonio

The University of Texas Health Science Center at San Antonio has provided facilities for the education and training of pharmacy students, residents, and fellows since 1972. The McDermott Clinical Sciences Building on the Health Science Center campus, which houses the pharmacotherapy division of the college and the Pharmacotherapy Education and Research Center, provides a state-of-the-art distance education classroom, a student computer laboratory, research laboratories, and offices for faculty and staff members. The Division of Pharmacotherapy maintains a broad range of affiliation agreements with institutions in San Antonio that provide extensive training opportunities in a variety of practice settings. Research opportunities exist in the areas of infectious disease, oncology, anticoagulation, stroke prevention, and psychiatry.

### Pharmacy Facilities in El Paso

The Cooperative Pharmacy Program with UT El Paso provides classrooms and conference rooms equipped for high-quality interactive telecommunications and satellite reception, as well as a complex of offices for faculty and staff members. Facilities can also accommodate intravenous admixture, patient assessment, and drug information. These accommodations supplement the physical facilities, student computer laboratories, libraries, and other services available on the University of Texas at El Paso campus.

### Pharmacy Facilities in Edinburg

The Cooperative Pharmacy Program with UT Pan American is located within the Edinburg Regional Academic Health Center (ERAHC), an educational and biomedical research facility. The building provides

research laboratories, computer and library facilities, staff and faculty offices, and conference rooms. The classrooms are equipped for both on-site and distance education and can accommodate instruction for intravenous admixture and patient assessment courses. The library, computer facilities, and health services on the UT Pan American campus are also available to students in the cooperative program.

## Office of Pharmacy Continuing Education

As part of a state university, the College of Pharmacy recognizes obligations to the profession of pharmacy on a state, national, and international level. The college began providing continuing education to pharmacists in 1953 in cooperation with the University's Division of Extension. Today, the college is an ACPE-approved provider of continuing pharmaceutical education. A primary goal of the Office of Pharmacy Continuing Education is to advance the pharmacist's knowledge and provide the skills necessary to adapt to a changing practice. Toward this end, the office offers a variety of programs, including home-study courses, seminars, multiday conferences, and certificate programs addressing the most current practice issues. Programs are conducted both on and off campus and by correspondence and distance learning. Annually, the office provides about 350 contact hours of continuing education programming to more than sixty-five hundred pharmacists across the United States.

## Learning Resource Center

The college's Learning Resource Center (LRC) offers a variety of instructional resources to students and faculty members. The LRC provides state-of-the-art digital video teleconferencing transmission of courses among the Austin campus, the Health Science Center at San Antonio, UT El Paso, UT Pan American, and other sites in The University of Texas System, so that faculty members can teach students at two or more locations simultaneously. Most courses are recorded and made available by videostreaming. The LRC also operates the Delgado Library, a multipurpose, nontraditional facility with computer support, individual and small-group study spaces, and seminar rooms.

The staff of the LRC provides faculty members and students with computer hardware and software consulting as well as advice on the use of media in the classroom. Facilities and equipment are available for video and data projection. The college's Web site (<http://www.utexas.edu/pharmacy/>) provides additional information and curriculum support for students and faculty members.

In the Delgado Library, students have access to desktop computers with removable media and CD drives, professional business software, and Internet client software. The electronic classrooms feature desktop computers with projection equipment and a full suite of software. The large distance-learning classroom supports notebook computer ports. Wireless high-speed Internet is available throughout the Pharmacy Building.

The goal of the Learning Resource Center is to provide the highest quality learning technology infrastructure and support services to students and faculty members.

## Libraries

The Life Science Library supports the teaching and research missions of the College of Pharmacy by providing access to an extensive array of print and electronic information resources. The library maintains extensive holdings in pharmacology, pharmaceuticals, pharmacy administration, and medicinal chemistry, with supporting materials in

medicine and nutrition. Biochemistry and medicinal chemistry material is complemented by the collections of the Mallet Chemistry Library. Medical material is supplemented by additional material in nursing, pediatrics, and psychiatry at the Perry-Castañeda Library.

The online Clinical Information Center (ClinIC), sponsored by the Life Science Library, provides electronic access to the complete resources of a drug information center. The center gives users access to significant electronic resources such as Micromedex, Access Pharmacy, AHFS Drug Information, Clinical Pharmacology Online, Facts & Comparisons, LexiComp online, and the Cochrane Library of evidence-based reviews, in addition to databases such as Medline, International Pharmaceutical Abstracts, Web of Science, and SciFinder Scholar. These electronic resources are available for remote access through the University Libraries Web site, which offers a full range of databases, access to electronic journals, and links to other digital information sources. Access to print information resources for students on rotation and at College of Pharmacy Cooperative Program campuses is provided through the University's D-Doc distance learning library service.

All units of the University Libraries offer reference service, circulation and reserve services, and interlibrary loan. Instruction in the use of information resources is provided in required pharmacy classes and by individual consultation.

## Financial Assistance Available through the College

Students entering the first year of the professional curriculum may be eligible to apply for certain college-based scholarships, and information is provided to students concerning these scholarships upon matriculation. Students who have completed the first year of the professional curriculum are eligible to apply for all scholarships and loans offered through the College of Pharmacy. Eligibility and application information is available at <http://www.utexas.edu/pharmacy/students/finaid/scholarship.html> and in the Office of Student Affairs, Pharmacy Building 5.112.

## Endowed Presidential Scholarship

To be eligible to receive an Endowed Presidential Scholarship, students must meet the college's eligibility requirements and must have maintained a 3.75 grade point average in required pharmacy courses. Students must also show evidence of active involvement in college, University, and other extracurricular activities. The minimum Endowed Presidential Scholarship is \$2,500.

## Other Endowed Scholarships

To be eligible to receive an endowed scholarship, students must meet the college's eligibility requirements. For some awards, students must meet additional criteria. The minimum endowed scholarship is \$1,500.

## Other Scholarships

Additional College scholarships are funded by various pharmacy associations, individuals, employers, and organizations. These scholarships are awarded, as they become available, through The University of Texas Pharmaceutical Foundation and at the direction of the Undergraduate Financial Aid Committee.

## Loan Funds

### The Klinck Family Loan Funds

These loan funds were established by the Klinck family of McAllen, Texas, to benefit students in need of financial assistance. Emergency loans, for a maximum of \$1000 are available; they normally are repayable within ninety days. Long-term loans of up to \$2,500 are available to pharmacy students who demonstrate financial need. The interest rate for these loans is six percent. Repayment begins three months after the student's graduation from pharmacy school, or once the student is no longer enrolled in the Pharmacy Program. Students may apply for more than one loan, but except in unusual circumstances the loans will total no more than \$5,000. Additional information is available in the Office of Student Affairs, Pharmacy Building 5.112.

### Other Loan Funds

Other loan funds may be available to pharmacy students. Information about these loans is available from the Office of Student Affairs, Pharmacy Building 5.112.

## Student Services

### Academic Advising

Academic and career advising are ongoing activities of the Office of Student Affairs, Pharmacy Building 5.112. Because advising is not restricted to the time just before registration, all students are strongly encouraged to seek advice whenever they need it about degree requirements, the availability of course offerings each semester, and taking courses in proper sequence.

Advising for University prepharmacy students is provided by assigned academic advisers in their colleges and by Health Professions Advising in the College of Natural Sciences. University students interested in the profession of pharmacy should contact that office early in their college careers. Prepharmacy students from outside the University should seek advice from the Office of Student Affairs of the College of Pharmacy.

### Career Services

The college provides career counseling to students in the professional sequence of courses. Throughout the year, career counselors are available in the Office of Student Affairs to assist students in examining the career options available to them upon graduation.

In addition, a systematic exploration of professional career options is conducted as part of the professional development convocation series of courses. Guest lecturers include successful pharmacists representing a variety of pharmacy practice models, other health care and regulatory settings, and careers in professional organizations, education, research, and the pharmaceutical industry.

The College of Pharmacy, under the supervision of the assistant dean for experiential and professional affairs, conducts a Placement Conference for graduating seniors. The conference gives seniors an opportunity to interview for professional practice positions with major employers of pharmacists in Texas and throughout the nation. A career workshop to prepare students for interviews is held prior to the Placement Conference as a part of Senior Conference. A college-wide Career Day each spring, featuring displays by major employers,

allows students in all years of the curriculum to interact with numerous pharmacist employers.

The college also facilitates interaction between employers and professional students interested in obtaining internships. More information on this process is provided to all students during the first professional year.

A limited number of competitive internships both in and outside of Texas are available by application only. Information is available in the Office of Student Affairs, Pharmacy Building 5.112; from individual faculty members; and via the student's own internship search.

As a complement to the assistance available from the college, the University's Sanger Learning Center and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies provide comprehensive career services to all students. The centers offer professional assistance to students in choosing or changing their majors or careers, seeking an internship, and planning for a job search or graduate study.

The University makes no promise to secure employment for each graduate.

## **Student Organizations**

### **American Association of Pharmaceutical Sciences (AAPS)**

The University of Texas at Austin Student Chapter of AAPS was initiated in 2003 with the primary goal of increasing awareness of educational and career opportunities in the pharmaceutical sciences among UT College of Pharmacy students. The organization fosters participation at the national AAPS Annual Meeting and Exposition.

### **American Pharmaceutical Association Academy of Students of Pharmacy (UT-ASP)**

In December, 1951, the Longhorn Pharmaceutical Association was organized as an association jointly representing the student branches of the American Pharmaceutical Association and the Texas Pharmaceutical Association. Renamed in 1998, the association sponsors service projects and social events and serves to develop professionalism in pharmacy students.

### **Asian Pharmacy Students Association (APSA)**

The mission of the Asian Pharmacy Students Association, established at the University in 1999, is to promote unity among pharmacy students who have common interests, values, and backgrounds, in order to help them achieve educational, professional, and personal excellence.

### **Christian Pharmacists Fellowship International (CPFI)**

This group seeks to identify and enroll all Christian pharmacists, wherever they practice, and to assist them in creating opportunities for fellowship. CPFI is the first international organization of evangelical Christian pharmacists established with a focus on integrating the spiritual and vocational dimensions of the pharmacist's role.

### **Kappa Epsilon (KE)**

Kappa Epsilon is a national professional fraternity established to promote careers for women in pharmacy, but membership is open to women and men. Xi chapter, established in 1943, sponsors service

and professional projects, including a city-wide Poison Prevention program in elementary schools each March, as well as social events and other extracurricular activities.

### **Mexican American Association of Pharmacy Students (MAAPS)**

The primary goals of the Mexican American Association of Pharmacy Students are to assist in the recruitment and retention of qualified students in the College of Pharmacy, to provide health care education to the community, and to maintain open communication channels between students and the college. Membership is open to prepharmacy and professional students.

### **Pharmacy Council**

The Pharmacy Council is composed of officers and representatives of the recognized student organizations in the College of Pharmacy and elected student representatives from each of the professional pharmacy classes. The president, financial director, and Senate representative of the council are also members of the Senate of College Councils, and a member of the council serves as the college's representative to Student Government. Acting as liaison between the student body and the Office of the Dean, the Pharmacy Council works to ensure the equitable consideration of student concerns and problems. The council sponsors orientation programs for new pharmacy students, college and University-wide programs, and events that promote student-faculty interaction.

### **Pharmacy Graduate Students' Association (PGSA)**

This association conducts activities that promote the general welfare of pharmacy graduate students. Its chief purposes are to encourage and facilitate graduate student communication and interaction; to gather and disseminate information important to pharmacy graduate students; to represent pharmacy graduate students to the University community; and to promote pharmaceutical education at the undergraduate level.

### **Phi Delta Chi (PDC)**

Lambda chapter of Phi Delta Chi, established at the University in 1905, was reactivated in 1956. Phi Delta Chi is a professional pharmaceutical fraternity of national standing. Membership is open to qualified professional students who are interested in promoting leadership, scholarship, and professional ethics in the field of pharmacy.

### **Phi Lambda Sigma (PLS)**

Psi chapter of Phi Lambda Sigma, the national pharmacy leadership society, was established at the University in 1989. Students selected for membership must be of high moral and ethical character, must have demonstrated dedication, service, and leadership in the advancement of pharmacy, must have completed at least ninety semester hours of scholastic work, and must be in good academic standing as defined by the College of Pharmacy.

### **Rho Chi**

Nu chapter of Rho Chi, the national pharmaceutical honor society, was established at the University in 1930. Charters for chapters of this organization are granted only to groups in colleges that are members in good standing of the American Association of Colleges of Pharmacy. Eligibility for membership in the society is based on scholarship, character, personality, and leadership. Students selected for membership must have a pharmacy grade point average of at least 3.20, must be in the top 20 percent of their class, and must have



completed the first professional year of the pharmacy curriculum. All candidates must be approved by the dean of the College of Pharmacy.

### **UT Chapter, International Society of Pharmacoeconomics and Outcomes Research (UT-ISPOR)**

This group's mission is to provide an environment in which students can share knowledge in pharmacoeconomics and health outcomes research. It brings together students of pharmacoeconomics and outcomes research and members of the pharmaceutical industry, health-related organizations, and academia; acts as a resource for students interested in pharmacoeconomics and outcomes research; and provides an opportunity for students to become familiar with the work of ISPOR and to be represented in its affairs.

### **UT Chapter, National Community Pharmacists Association (NCPA)**

NCPA is a national professional organization representing the interests of independent community pharmacists. The student chapter sponsors projects and events designed to foster the entrepreneurial spirit among future practitioners. The national association has a loan program available to student members, as well as several competitive scholarships and research grants.

### **UT Chapter, National Pharmaceutical Association (SNPhA)**

The purpose of the SNPhA is to plan, organize, coordinate, and execute programs geared toward the improvement of the health, educational, and social environment of the minority community.

### **University of Texas Student Society of Health-System Pharmacists (UTSSHP)**

The student chapter of the Texas Society of Health-System Pharmacists is an organization for students interested in institutional or health-system pharmacy practice. An affiliate of the American and Texas Societies of Health-System Pharmacists, the organization considers a wide range of topics of interest to health professionals and encourages the broadest possible educational introduction to institutional pharmacy and pharmaceutical care. This introduction includes presentation of programs and seminars, tours of pharmacy practice sites, and distribution of literature. The chapter publicizes job openings in hospital pharmacies across the state.

### **Longhorn Prepharmacy Association (LPPA)**

LPPA comprises all prepharmacy students at UT Austin. The group's chief objectives are to function as a small community of students within a large institution; to provide current information on the preprofessional and professional curricula; and to provide information about the pharmacy profession.

## **Legal Requirements for Professional Practice**

Upon matriculation to the first professional year in the College of Pharmacy, each student must apply to become an intern trainee with the Texas State Board of Pharmacy (<http://www.tsbp.state.tx.us/>). Each student must be registered as an intern trainee, and subsequently as a student-intern, in order to acquire, through pharmacy courses, the internship hours necessary for licensure upon graduation as a pharmacist in Texas. Only after completion of the first

professional year (at least thirty semester hours) as certified by the College of Pharmacy may the intern-trainee become a student-intern with the Texas State Board of Pharmacy.

Students should be aware that the process of registration as an intern includes a criminal history and fingerprint check. The existence of a criminal record may preclude the student from registration as an intern, completion of experiential courses in the curriculum, and/or from subsequent licensure as a pharmacist in Texas. However, the Texas State Board of Pharmacy may grant limited internship status under certain conditions to those with prior convictions. It is possible that health care facilities in which students are placed for internship may mandate an additional background check and/or drug screen. Students assigned to these facilities must comply with all such requirements. If a student cannot be placed in internship facilities because of prior convictions that appear on any background check, or because of a positive drug screen, his or her graduation may not be possible or may be significantly delayed.

After completing the first professional year (at least thirty semester hours), students registered as student-interns may earn internship hours toward licensure not only through professional sequence pharmacy courses but also outside the academic program through employment in certain practice settings. Internship hours gained outside the College of Pharmacy curriculum, however, may not replace any portion of the experiential program required for graduation.

Graduates of the College of Pharmacy are eligible to apply to the Texas State Board of Pharmacy for licensure as pharmacists. Licensure exams may be taken shortly after graduation. Postgraduate internship experience is not currently required for Texas licensure but may be required for licensure in other states.

Additional information about requirements for pharmacy licensure in Texas is available from the Texas State Board of Pharmacy, William P. Hobby Building, 333 Guadalupe Street. The mailing address is PO Box 21, Austin TX 78701-3942. The URL is <http://www.tsbp.state.tx.us/>, and the telephone number is (512) 305-8000.

Intern registration and pharmacist licensure requirements are subject to change by the Texas State Board of Pharmacy. Students and graduates must meet current requirements, even if they differ from those described above.

## **Graduate Degrees**

Graduate programs leading to the Master of Science in Pharmacy and the Doctor of Philosophy are offered through the Graduate School and described in the *Graduate Catalog* (<http://registrar.utexas.edu/catalogs>). The graduate student may specialize in medicinal chemistry, pharmacology and toxicology, pharmaceuticals, pharmacotherapy, pharmacy administration, or translational science. Faculty members in each area work closely with students and engage in research in such fields as drug synthesis, pharmacokinetics, drug mechanisms and toxicity, and clinical research.

# Admission and Registration

## Admission

### Admission to the University

For the College of Pharmacy's PharmD program, admission and readmission are the responsibility of the dean of the College as delegated by the University's director of admissions. Students accepted to the PharmD Program will be processed for admission to the University (if not already enrolled at the University of Texas at Austin).

### Admission to the Professional Curriculum

Admission to the University in no way implies or guarantees admission to the professional curriculum. No student may begin the professional curriculum until he or she has been admitted to the professional curriculum in pharmacy by the dean, following recommendation by the Admissions Committee of the College of Pharmacy, according to the procedures outlined in this section regarding admission. All students must meet the admission requirements given in the catalog in effect at the time of application. If the number of eligible applicants to the professional curriculum exceeds the number that available facilities can accommodate, final selection is made by the college Admissions Committee and the dean.

Beginning with the admission cycle for fall 2013, which opens June, 2012, the College will use PharmCAS, the national PharmD application system. All student applications will go through PharmCAS, and those accepted for enrollment in the college will be processed for direct admission to the University.

Students who are enrolled in a pharmacy program at another institution and wish to transfer to the University should follow the normal application process. Upon admission to the University and the professional curriculum, the student may request advanced standing in the pharmacy curriculum. Placement is contingent on availability of space and on transcript evaluation to determine University equivalencies for the student's coursework.

As a condition of admission to the college, each student must sign a statement that he or she agrees to accept assignment to any one of the college's internship regions throughout the state. Cooperative arrangements for pharmacy education exist with academic units and health care institutions in the following internship regions: Austin/Temple/Waco, Dallas/Fort Worth, El Paso, Galveston/Houston, the Rio Grande Valley, and San Antonio. Internship regions may be added or deleted at any time based on the availability of resources. Elective regions, which provide limited internship experiences for a specified period of time (less than four months), may also be available.

Students assigned to San Antonio and students from UT El Paso and UT Pan American in Edinburg who are in the Cooperative Pharmacy Program must spend the last two years of the professional program in those regions. Students assigned to the other regions spend only the final year of the program (the fourth professional internship year) in their assigned region.

Students are assigned to internship regions through a computer-generated random assignment system that takes students' ranked preferences into account. Since most students relocate to internship regions outside the Austin area, region assignment occurs during the latter part of the first professional year to allow students adequate time to make personal and financial arrangements. There are no exceptions

to the region assignment process. If a student fails to agree to accept assignment to any region, he or she will not be admitted to the college.

The Cooperative Pharmacy Program is available to highly qualified high school seniors entering the University of Texas at El Paso or the University of Texas - Pan American. The program offers these students an alternate pathway for admission to the University of Texas at Austin College of Pharmacy once they complete the requirements of the program at the Cooperative Pharmacy Program campus. Additional information is available from UT El Paso at (915) 747-8535 or <http://chs.utep.edu/cpp/>, and from UT Pan American at (956) 318-5255 or [http://portal.utpa.edu/utpa\\_main/daa\\_home/hshs\\_home/pharmacy\\_home/](http://portal.utpa.edu/utpa_main/daa_home/hshs_home/pharmacy_home/).

### Admission to the First Professional Year

Admission to the professional curriculum is competitive. The application process is conducted via the national PharmD admissions program, PharmCAS, as specified on the PharmCAS website ([www.pharmacas.org](http://www.pharmacas.org) (<http://catalog.utexas.edu/undergraduate/pharmacy/admission-and-registration/http://www.pharmacas.org>)) and linked via the College of Pharmacy at <http://www.utexas.edu/pharmacy/admissions/pharmd.html>.

#### Basic Admission Criteria

1. Scholarship, as indicated by grade point average and Pharmacy College Admission Test (PCAT) scores, including writing sample scores, submitted via PharmCAS. Scores more than three years old are not accepted.

In evaluating the applicant's academic record, the Admissions Committee pays particular attention to the courses required for admission. Ideally, the applicant will have a grade point average of at least 2.80 in prerequisite coursework. Typically, more than 90 percent of successful applicants have grade point averages greater than 3.00, and more than 50 percent of successful applicants have grade point averages greater than 3.60. The applicant typically will have a PCAT composite score in at least the 70th percentile, a score in at least the 70th percentile in each area, and writing scores of at least 3.00. Typically, more than 75 percent of successful applicants have a composite score in the 70th percentile or better, and more than 50 percent of successful applicants have a composite score in the 85th percentile or better, as specified in the PharmCAS application process.

2. Essays as specified in the PharmCAS application process.
3. Letters of recommendation submitted via PharmCAS from people who know the applicant well professionally, especially pharmacist employers.
4. Transcripts of all academic work submitted via PharmCAS.
5. A résumé submitted via PharmCAS that provides details about the applicant's professional, organizational, volunteer, and service experience.

#### Additional Personal Factors

The information specified below is submitted either via PharmCAS or through the college's supplemental application.

1. Pharmacy and other related work experience
2. Organizational, service, and volunteer activities that demonstrate community involvement and leadership potential
3. Teaching, tutoring, and mentoring experience

4. Research experience
5. Honors and awards
6. Interview. Applicants are screened for interviews based on academic record, direct work experience in the profession, special life circumstances, and any other compelling factors. If the applicant is invited for an interview, then other factors are considered; these include but are not limited to the following:
  - A. Knowledge of and motivation for pharmacy as a career
  - B. Lifelong learning strategies
  - C. Critical thinking skills
7. Special life circumstances; these include but are not limited to the following:
  - A. Single parent
  - B. Socioeconomic status of family
  - C. First generation attending college
  - D. Overcoming adversity
  - E. Resident of an underserved area of the state or an area of Texas with a health professions shortage
  - F. Race and ethnicity
  - G. Cultural background

Because the University is a public institution, preference is given to applicants who are legal residents of Texas and to applicants from states without colleges of pharmacy. Applicants are strongly encouraged to examine the admission statistics published by the college on its admissions Web site, [http://www.utexas.edu/pharmacy/admissions/ad\\_stats.html](http://www.utexas.edu/pharmacy/admissions/ad_stats.html).

## Application Deadlines

The deadline to apply for admission to the college is specified on the PharmCAS website ([www.pharmcas.org](http://www.pharmcas.org) (<http://catalog.utexas.edu/undergraduate/pharmacy/admission-and-registration/http://www.pharmcas.org>)) and linked via the College of Pharmacy at <http://www.utexas.edu/pharmacy/admissions/>.

## Admission Requirements

1. The applicant must have completed at least sixty-six semester hours in total, and must have completed the following forty-five hours in prerequisite courses prior to enrolling in the professional pharmacy curriculum:
  - A. Nine hours of biology, including cellular and molecular biology, structure and function of organisms, and genetics
  - B. Eight hours of general chemistry with laboratory
  - C. Three hours of freshman-level rhetoric and writing
  - D. Three hours of sophomore-level survey of American, British, or world literature
  - E. Three to six hours of calculus (to include both differential and integral calculus)
  - F. Three hours of statistics
  - G. Eight hours of organic chemistry with laboratory
  - H. Four to five hours of microbiology with laboratory
  - I. Four hours of physics with laboratory

The remaining twenty-one semester hours should be the Core Curriculum (p. 22).

2. The applicant must remove all deficiencies in high school units by the means prescribed in *General Information* before seeking admission to the professional curriculum.

## Admission Procedures

1. All applications for the PharmD Program will be handled through the national PharmD admissions system, PharmCAS ([www.pharmcas.org](http://www.pharmcas.org) (<http://www.pharmcas.org>)). Students must adhere to the deadlines for admission specified. The PharmCAS application process will include a supplementary application to the college (with a nonrefundable supplementary application fee) necessary to acquire additional academic information for University admission. Candidates will be notified if additional information is required.
2. Selected applicants will be asked to appear for a personal interview.
3. The applicant is considered on the basis of overall academic performance, with emphasis on grades in the required PharmD prerequisite courses. In accordance with University policy, courses in which the applicant earned a grade of *D+*, *D*, *D-*, or *F* at another institution are not transferable and may not be used to fulfill any degree requirements. However, courses in which the student earned a grade of *D+*, *D*, or *D-* are considered when the student's admissibility to the professional curriculum is determined.
4. Applicants who have been offered admission to the University and to the PharmD program will be asked to pay a nonrefundable enrollment deposit to the University. If the student does enroll in the program that fall, the deposit will be applied to the semester's tuition bill.
5. All students accepted for admission in the PharmD Program will be processed for admission to the University of Texas using the information in the PharmCAS application. Additional materials for University admission may be required:
  - A. A high school transcript, if the applicant's foreign language requirement was completed in high school. Official transcripts must be sent to the University's Office of Admissions.
  - B. Scores on the Texas Higher Education Assessment (THEA) test (or an appropriate assessment test), if and only if the student is required by state law to take this test.
  - C. Credit earned by examination. These reports should be sent directly to the Center for Teaching and Learning—Student Testing Services at the University.
  - D. Official transcripts for all colleges/universities attended.
6. An applicant who has been admitted to the University and to the professional curriculum but fails to enroll in either, and who wishes to enter the professional curriculum in a subsequent fall semester, must reapply both to the University and to the College of Pharmacy and must meet all requirements in force at the time of reapplication.
7. An applicant who has been admitted to and enrolls in the professional curriculum but subsequently withdraws, and who wishes to reenter in a subsequent fall semester, must apply for readmission to the professional curriculum and must meet all

requirements in force at the time of reapplication. A student who has been out of the University for a semester or more must also apply for readmission to the University.

Although not a College of Pharmacy requirement, students may be subject to other health clearance requirements mandated by health care facilities for practicum.

## Technical Standards

"Technical standards" are the observational, communication, sensory/motor, and intellectual skills, the behavioral and social attributes, and the ethical values required for the completion of the professional curriculum and for the practice of pharmacy. These standards are described on the college's Web site at <http://www.utexas.edu/pharmacy/edutrain/technicalstandards.html>. Each applicant should review the technical standards. Any applicant who believes he or she may have difficulty meeting them should contact the college's director of admission.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/), published before registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

## Registration as a Student Pharmacist-Intern

Upon matriculation to the first professional year, each student must register as an intern-trainee with the Texas State Board of Pharmacy. This is accomplished through completion of the Application for Student-Intern Registration. Each student must be registered first as an intern-trainee and subsequently as a student-intern in order to complete the academic requirements for the degree.

Additional information regarding intern registration and pharmacist licensure is given in the section Legal Requirements for Professional Practice (p. 590). This regulation is subject to change by the Texas State Board of Pharmacy. Every attempt is made to inform students of changes as they occur.

## Professional Liability Insurance

Professional liability insurance is required of all students each year of the professional pharmacy curriculum. Coverage in the amount of two million dollars for each claim and four million dollars in the aggregate per year is provided through the insurance policy. The approximate annual premium is \$17.00, payable by the student. The policy covers the period September 1 through August 31.

## Medical Clearance Requirements

In addition to the University's immunization requirements, students must meet additional immunization requirements for students in healthcare programs as articulated in Title 25 of the Texas Administrative Code, Rule 97.64, and as mandated by the practice sites in which students participate in practicum experiences.

Immunization requirements are subject to change. Every effort is made to notify students promptly of any changes. A current list of vaccination requirements can be found online at <http://www.utexas.edu/pharmacy/general/experiential/student/immunization.html>.

## Student Health Insurance

Students must procure health insurance to cover treatment for injuries or illness, and must provide proof of insurance each year of the curriculum. This is especially important for the experiential components of the curriculum, spanning all four professional years, when students have frequent contact with patients in a number of different health care facilities.

The Student Health Insurance Plan, operated under the auspices of University Health Services, offers optional low-cost insurance for students who are not covered by other programs. Information about this plan is available through University Health Services.

## Academic Policies and Procedures

### Academic Standards

University regulations on scholastic probation and dismissal are given in *General Information* (<http://registrar.utexas.edu/catalogs/>). In addition, the following academic standards are in effect in the College of Pharmacy.

### Academic Progress

1. The student must repeat a required pharmacy course in which he or she earns a grade of *F*. The student who earns a grade of *D+*, *D*, or *D-* in a required pharmacy course becomes subject to the policies on academic probation and dismissal described below.
2. The student must earn a grade of at least *C-* in each elective pharmacy course. If the student fails to earn a grade of at least *C-* in an elective pharmacy course, he or she may repeat the course or may take another elective course in its place, but only courses in which the student has earned a grade of at least *C-* may be counted toward the professional elective requirement.
3. The student must earn an average of at least two grade points (2.00) a semester hour on all courses undertaken at the University, whether passed or failed in order to graduate. The student must also earn an average of at least two grade points (2.00) a semester hour on all required pharmacy courses undertaken, whether passed or failed.
4. The student may not repeat for credit a course in which he or she has earned a grade of *C-* or better, except under circumstances approved by the dean.
5. Pharmacy elective courses & and laboratory problems courses can be taken on the letter-grade or pass/fail basis, unless otherwise stated in the *Course Schedule*, [registrar.utexas.edu/schedules/](http://registrar.utexas.edu/schedules/). However, the student must complete the Professional Electives Course Requirement (p. 597) for elective courses taken for a letter grade.



## Academic Probation and Dismissal

A student is placed on academic probation in the College of Pharmacy if he or she receives a grade of *D+*, *D*, *D-*, or *F* in any required pharmacy course. If the grade received is an *F*, the student must repeat the course and may not progress to courses for which it is a prerequisite until he or she has earned a grade of at least *C-* in the failed course. If the initial grade received is a *D+*, *D*, or *D-*, the student may progress to courses for which the course is a prerequisite. The student may choose to repeat a course in which he or she received a *D+*, *D*, or *D-*, if the course does not conflict with other courses the student would normally take in the same semester; however, this choice affects the student's release from academic probation as described in the following section.

If the student receives more than two incompletes in required pharmacy courses, regardless of the grades ultimately awarded, he or she is subject to review by the Academic Performance Committee. The committee may choose to place the student on academic probation.

A student is subject to dismissal from the college if he or she receives more than one *D+*, *D*, *D-*, or *F* in required pharmacy courses in one semester. The student is also subject to dismissal if he or she receives an additional *D+*, *D*, *D-*, or *F* while on academic probation or conditional academic probation.

Students on academic probation are expected to focus on academic improvement and thus are not allowed to hold student offices (elected or appointed) or to receive college stipends for travel to professional meetings or other college-sponsored events.

### Release from Academic Probation

After receiving a grade of *F*, the student must repeat the course and earn a grade of at least *C-*. If the failed course is a prerequisite for another course, the student must repeat the course and earn a grade of at least *C-* before taking the course for which the failed course is a prerequisite. In the semester or summer session in which he or she repeats the course, the student must complete a full academic load, including at least five hours in required pharmacy courses and/or other courses recommended by the academic adviser. A full academic load is defined for this purpose as twelve hours in a long-session semester and six hours in the summer. The new grade is averaged with the grade of *F* when the student's pharmacy grade point average is calculated. If the new grade is *C-* or better, the student is released from academic probation if and only if he or she has earned no further grades of *D+*, *D*, *D-*, or *F* while on academic probation or conditional academic probation. If the student does not earn a grade of at least *C-* upon repeating the course, he or she is subject to academic dismissal.

After receiving a grade of *D+*, *D*, or *D-*, the student chooses whether or not to repeat the course, if the course does not conflict with other courses the student would normally take in the same semester. He or she may progress to courses for which the course in question is a prerequisite. If the student chooses to repeat the course, he or she must earn a grade of at least *C-*. If the new grade is a *C-* or better, the student is released from academic probation only if he or she has earned no further grades of *D+*, *D*, *D-*, or *F* while on academic probation or conditional academic probation. If the student does not earn a grade of at least *C-* upon repeating the course, he or she is subject to academic dismissal. The new grade is averaged with the grade of *D+*, *D*, or *D-* when the student's pharmacy grade point average is calculated.

If the student chooses not to repeat the course, he or she remains on academic probation (or conditional academic probation, described

below) through completion of the P4 advanced pharmacy practice experiential courses in the final semester. To take the P4 experiential courses, the student must have a grade point average of at least 2.00 in required pharmacy courses. If the student earns the symbol *CR* in each P4 advanced pharmacy practice course, he or she is released from probation and graduates in good academic standing with the college.

### Conditional Academic Probation

If a student on academic probation receives no grade lower than *C-* in required pharmacy courses during the following semester or summer session in which he or she takes a full academic load, the student may be placed on conditional academic probation. This status allows the student to hold student office (elected or appointed) and to receive college stipends for travel to professional meetings or other college-sponsored events. The student remains on conditional academic probation until graduation and is subject to dismissal if he or she receives a second grade of *D+*, *D*, *D-*, or *F*.

### Calculation of the Grade Point Average

1. The student's University grade point average includes all courses taken at the University for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. If the student has repeated a course, including those courses for which he or she earned a grade of *D+*, *D*, *D-*, or *F*, all grades earned are included in the University grade point average.
2. The student's College of Pharmacy grade point average includes all required professional courses (excluding ALL elective courses) taken at the University for which a grade or symbol other than *Q*, *W*, *X*, or *CR* is recorded. When a student repeats a required pharmacy course, the second grade in the repeated course is averaged with the previous grade when the student's College of Pharmacy grade point average is calculated.

### The Academic Performance Committee

The College of Pharmacy Academic Performance Committee monitors the academic progress of students in the professional program. The committee makes recommendations to the dean regarding students' academic progress and academic probation and dismissal. The committee also makes recommendations to assist students who may be in academic difficulty. Any student in academic difficulty may be asked to appear before the committee for guidance. The committee hears all student appeals regarding academic progress and academic probation and dismissal. The committee aids the Admissions Committee in the evaluation of students who wish to return to the college after having been dismissed.

### Course Load and Sequence of Work

1. To progress to the final-year experiential courses, the student must have successfully completed all basic education requirements and all required and elective pharmacy courses except those in the internship year.
2. Because final-year experiential courses are offered on the pass/fail basis only, students must have attained both the University and the College of Pharmacy grade point average of at least 2.00 required for graduation before they begin the P4 advanced pharmacy practice experiential year.

3. If a conflict arises between University requirements and a student's employment, the student must resolve the conflict in favor of the University requirements.
4. A student who is not on academic probation must take at least twelve semester hours during any long-session semester, at least six hours of which must be for a letter grade (not pass/fail).
5. A student on academic probation must take at least twelve semester hours during any long-session semester or at least six semester hours during the summer session in order to clear academic probation.
6. Students may not take courses for degree credit at another institution without prior approval from the dean of the College of Pharmacy.
7. All students seeking to reenter the College of Pharmacy after having been placed on academic dismissal must make formal application through the Admissions Committee. The application is processed through the Admissions Committee with recommendations from the Academic Performance Committee and the approval of the dean.

## Early Practice Experience

All students must participate in an early practice experience, which consists of at least two hundred hours in either a community pharmacy or a hospital pharmacy practice setting. Since the student must be registered with the Texas State Board of Pharmacy as a student-intern before gaining these hours, and since that registration requires that students have completed the first year of the professional sequence, students may not begin accruing these hours until after the first professional year. The early practice experience must be completed before the student begins the fourth professional year.

Additional information is provided to students during the first professional year.

## Standards of Ethical Conduct

Pharmacy practitioners enjoy a special trust and authority based on the profession's commitment to a code of ethical behavior in its management of client affairs. The inculcation of a sense of responsible professional behavior is a critical component of professional education, and high standards of ethical conduct are expected of pharmacy students.

Toward that end, the faculty and students of the College of Pharmacy have pledged their support to the Policy Statement on Ethical Conduct and Scholastic Integrity and the Code of Ethics that implements this Policy Statement. Upon entering the College of Pharmacy, and each academic year thereafter, students are asked to recite and sign the following pledge:

"As a student of the University of Texas College of Pharmacy, I have reviewed and hereby pledge my full support to the Honor Code. I pledge to be honest myself, and in order that the spirit and integrity of the Honor Code may endure, I pledge that I will make known to the appropriate authorities cases of dishonesty which I observe in the College of Pharmacy."

In addition, the following oath, which students will be asked to sign, is included at the end of all class examinations: "I have neither participated in nor witnessed any acts of academic dishonesty pertaining to this assignment." At the discretion of the instructor, the

oath may also be included for other assignments such as quizzes, written reports, or papers.

The entire text of the Policy Statement on Ethical Conduct and Scholastic Integrity and the Honor Code are available at <http://www.utexas.edu/pharmacy/students/handbook98/3code.html>.

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including failure of the course involved and dismissal from the college and/or the University. Since dishonesty harms the individual, fellow students, and the integrity of the University and the College of Pharmacy, policies on scholastic dishonesty are strictly enforced.

## Attendance in Class and Laboratories

Students in the College of Pharmacy are expected to attend all scheduled class and laboratory sessions in courses for which they are registered. If attendance is a course requirement that can impact the student's grade, the criteria for assessing attendance and consequences for nonattendance must be specified in the syllabus.

## Honors

University-wide honors are described in *General Information*. In addition, the College of Pharmacy encourages academic excellence through Rho Chi, the national pharmaceutical honor society, described in *Student Organizations* (p. 589), and through the Pharmacy Honors Program.

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

## Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

## Pharmacy Honors Program

### Criteria for Admission

Students who plan to seek special honors in pharmacy should apply to the chair of the Honors Program Committee after they have completed the fall semester of the first professional year; they must apply before they begin the second professional year. Students interested in the Pharmacy Honors Program are strongly encouraged to enroll in Pharmacy 151R, *Research Opportunities in the Pharmaceutical Sciences* in the spring semester of their first professional year. The criteria for admission to the program are (1) admission to the professional curriculum; (2) a grade point average of at least 3.00 in all required professional coursework completed at the time of application to the program; and (3) approval of the Honors Program Committee.

### Requirements for Completion

Requirements for the completion of the honors program are (1) a grade point average of at least 3.00 in all required professional courses; (2) a grade point average of at least 3.00 in all professional courses,

including required professional elective coursework; (3) completion of Pharmacy 167H at least twice; (4) completion of at least one honors elective; (5) completion of Pharmacy 278H and 479H; and (6) completion of the regular curriculum for the degree.

The statement "Research Honors in Pharmacy" appears on the transcript of each graduate certified to have completed the honors program.

## College of Pharmacy Recognition Awards

**The Highest GPA Award** is given to the graduate(s) with the highest grade point average in required PharmD courses.

**The Second Highest GPA Award** is given to the graduate(s) with the second highest grade point average in required PharmD courses.

**The College of Pharmacy Award for Outstanding Research** is given to a graduate who has demonstrated outstanding ability in areas of pharmacy research.

**The College of Pharmacy Award for Excellence in Patient Care** is presented to a graduate who has demonstrated excellence in patient care while pursuing the PharmD degree.

**The College of Pharmacy Award for Dedicated Service** is presented to a graduate who has shown a commitment to service above and beyond the norm.

**The College of Pharmacy Award for Exemplary Leadership** is presented to a graduate who has excelled in leadership while pursuing the PharmD degree.

**The College of Pharmacy Alumni Association Mortar and Pestle Award for Leadership, Service, and Patient Care** recognizes an exceptional graduate who has demonstrated outstanding leadership, service, and patient care in the college, the University, and the community while pursuing the PharmD degree. The award is a hand-carved mortar and pestle.

**College of Pharmacy Class Officers** are elected by their classmates and serve as permanent officers of their class.

Students' scholarly accomplishments are also recognized through election to Rho Chi, the national pharmaceutical honor society, and through admission to the Pharmacy Honors Program. Students' leadership accomplishments are recognized through election to Phi Lambda Sigma, the national pharmacy leadership society.

## Graduation

All students must fulfill the General Requirements (p. 18) for graduation. In addition, students seeking the Doctor of Pharmacy (PharmD) must complete in residence the courses prescribed for the third and fourth professional years.

## Degrees and Programs

The University offers the PharmD as the sole entry-level pharmacy practice degree. As described in the mission (p. 586), this program emphasizes an integrated and problem-based approach to disease

management as the core of the didactic, laboratory, and experiential program of study.

The capstone of the PharmD program is a series of seven six-week rotations known as the advanced pharmacy practice experiences (APPE). Each APPE course requires between forty and fifty on-site, practitioner-faculty-supervised hours of internship experience a week for six weeks.

The college expects but cannot guarantee that experiential sites will include Austin/Temple/Waco, Dallas/Fort Worth (the University of Texas Southwestern Medical Center and other area health care facilities), El Paso (the University of Texas at El Paso and area health care facilities), Galveston/Houston (the University of Texas Medical Branch at Galveston, the University of Texas M. D. Anderson Cancer Center, and other area health care facilities), the Rio Grande Valley (the University of Texas - Pan American and health care facilities primarily in Harlingen and McAllen), and San Antonio (the University of Texas Health Science Center and other area health care facilities). Students in the UT El Paso and UT Pan American cooperative programs and students assigned to San Antonio spend two years in these regions, while students assigned to other regions spend only the final year in the APPE region.

College of Pharmacy students who complete their experiential courses at the University of Texas Health Science Center at San Antonio are considered part of a joint PharmD degree program and receive a degree awarded jointly by the two institutions. The joint nature of this program is reflected on the student's diploma. Students who complete the UT El Paso or UT Pan American cooperative program receive a diploma reflecting the cooperative nature of their programs of study.

In completing the Doctor of Pharmacy degree, students also fulfill the internship requirements of the Texas State Board of Pharmacy. The final year of APPE courses and several other practice-based experiential courses, beginning in the first professional year, make up the experiential program. The professional experience courses are currently approved by the Texas State Board of Pharmacy to meet its standards for completion of the professional internship licensure requirement. The board reassesses all programs annually.

## The Minor

While a minor is not required as part of the PharmD degree program, the student may choose to complete additional coursework in a field outside of the College of Pharmacy. The minor consists of at least twelve semester hours of coursework in a single field of study or in closely related fields, including at least nine hours of upper-division work. The upper-division coursework must be completed in residence; coursework the student takes on a cooperative program campus in the third professional year may be counted. A course to be counted toward the minor may not be taken on the pass/fail basis, unless it is offered only on that basis. A course may not be counted both toward the minor and toward the 213 hours of work required for the PharmD degree.

Students are encouraged to use health-care-related courses to make up the minor; lists of such courses in a variety of fields are available in the Student Affairs Office. While the College of Pharmacy allows students to minor in any field in which the University offers a major, prerequisites and other enrollment restrictions may prevent the student from minoring in some fields. Before planning to take specific courses, the student should consult a pharmacy adviser and the department that offers the courses.

Written verification that a student completed the minor is available from the dean's office.

## Applicability of Certain Courses

### Physical Activity Courses

Physical activity (PED) courses are offered by the Department of Kinesiology and Health Education. They may not be counted toward a degree in the College of Pharmacy. However, they are counted among courses for which the student is enrolled, and the grades are included in the University grade point average.

### ROTC Courses

Courses in air force science, military science, and naval science may be substituted for a total of nine semester hours of nonpharmacy electives by students who complete the sixteen to twenty semester hours of required air force science, military science, or naval science coursework and accept a commission in one of the services. These courses may not be counted toward the professional elective requirement.

### Correspondence and Extension Courses

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree unless it is specifically approved in advance by the dean. No more than 30 percent of the semester hours required for any degree may be completed by correspondence, and no pharmacy courses taken by correspondence or extension may be counted toward a pharmacy degree.

### Prescribed Work

Students who enter the Doctor of Pharmacy degree program must complete a minimum of 213 semester hours of coursework in the areas described below—the core curriculum, additional basic education requirements, professional electives, and preprofessional and professional coursework.

### Core Curriculum

Each student must complete the University's Core Curriculum (p. 22). Because of the intensity and structure of the professional pharmacy curriculum, and because admission to the professional curriculum is highly competitive, the College of Pharmacy strongly recommends that students complete all of the core courses before they enter the college

The following core requirements are met by the preprofessional and professional coursework described below: English composition, mathematics, science and technology (parts I and II), and humanities. Students must complete additional coursework to meet the core requirements listed below; the courses in each core area are listed in Core Curriculum (p. 22).

Courses	Sem Hrs
First-year signature course	3
For students who enter the professional curriculum in fall 2010 or fall 2011, an approved course in the College of Natural Sciences will meet this requirement; students who enter the professional curriculum in fall 2012 or later must meet this requirement as directed by the School of Undergraduate Studies.	
American and Texas government	6
American history	6
Social and behavioral sciences	3
Visual and performing arts	3
<b>Total</b>	<b>21</b>

Transfer students who complete the core curriculum at another public Texas institution of higher education with core completion specified on their transcript and who are then admitted to the PharmD program are considered "core complete" by the University. Core curriculum requirements are waived for students admitted to the PharmD program who have previously earned a bachelor's degree.

### Additional Basic Education Requirements

All students must also earn the following skills and experiences flags: writing, quantitative reasoning, cultural diversity in the United States, ethics and leadership, and independent inquiry. See skills and experiences for more information; courses that carry these flags are identified in the *Course Schedule*, <http://registrar.utexas.edu/schedules/>.

Students who enter the professional curriculum in fall 2012 or later must also earn a global cultures flag as directed by the School of Undergraduate Studies. The global cultures flag is not required of students who enter the professional curriculum in fall 2010 or fall 2011.

Flag requirements are waived for students admitted to the professional curriculum who have already earned a bachelor's degree.

All students must complete the foreign language (p. 24) requirement before they enter the professional curriculum.

### Professional Electives Course Requirement

The student must complete at least two professional elective courses, for a total of at least six semester hours, on the letter-grade basis. The student must take the courses used to fulfill the professional electives requirement after admission to the professional curriculum.

### Preprofessional and Professional Coursework

The following courses are required. The course sequence given here shows the usual order in which courses are taken to fulfill prerequisite requirements and illustrates the feasibility of completing requirements for the degree within six calendar years. Students who depart significantly from this sequence may need more time to complete their coursework, because most courses are taught only once a year and because in a given semester the scheduled meeting



time of a preprofessional or professional course may conflict with the times of core courses or professional electives.

Courses Sem Hrs

**First Preprofessional Year**

Fall	
Biology 311C, <i>Introductory Biology I</i>	3
Chemistry 301, <i>Principles of Chemistry I</i>	3
Mathematics 408C, <i>Differential and Integral Calculus</i>	4
Rhetoric and Writing 306, <i>Rhetoric and Writing</i>	3
Undergraduate Studies 302, <i>First-Year Signature Course</i> or Undergraduate Studies 303, <i>First-Year Signature Course</i>	3

Undergraduate Studies 302 or 303 is required of students who enter the professional curriculum in fall 2012. For students who enter the professional curriculum in 2010 or fall 2011, an approved course in the College of Natural Sciences fulfills the first-year signature course requirement.

**Total,  
preprofessional  
courses 16**

Spring	
Biology 311D, <i>Introductory Biology II</i>	3
	3
Chemistry 204, <i>Introduction to Chemical Practice</i>	2
Mathematics 316, <i>Elementary Statistical Methods</i>	3
Social and behavioral sciences core course	3
American history	3

**Total,  
preprofessional  
courses 17**

**Second Preprofessional Year**

Fall	
Biology 325, <i>Genetics</i>	3
Chemistry 320M, <i>Organic Chemistry I</i>	3
English 316K, <i>Masterworks of Literature</i>	3
Physics 302K, <i>General Physics--Technical Course: Mechanics, Heat, and Sound</i>	3
Physics 102M, <i>Laboratory for Physics 302K</i>	1
American and Texas government	3

**Total,  
preprofessional  
courses 16**

Spring	
Chemistry 220C, <i>Organic Chemistry Laboratory</i>	2
Chemistry 320N, <i>Organic Chemistry II</i>	3
Biology 326M, <i>Introductory Medical Microbiology and Immunology</i>	3
Biology 226L, <i>General Microbiology Laboratory</i>	2
American and Texas government	3
American history	3
Visual and performing arts core course	3

**Total,  
preprofessional  
courses 19**

**First Professional Year**

Fall	
Pharmacy 341C, <i>Pharmaceutical Biochemistry I</i>	3
Pharmacy 342C, <i>Physical and Chemical Principles of Drugs</i>	3
Pharmacy 242DA, <i>Introduction to Patient Care</i>	1
Pharmacy 142P, <i>Physical and Chemical Principles of Drugs Laboratory</i>	1
Pharmacy 343C, <i>Function and Anatomy of Human Systems I</i>	3
Pharmacy 143M, <i>Medicinal Chemistry Principles</i>	1
Pharmacy 143P, <i>Basic Pharmaceutical Sciences Laboratory</i>	1
Pharmacy 252C, <i>Biopharmaceutics</i>	2
Pharmacy 142H, <i>Professional Development Convocation I</i>	1

**Total,  
professional  
courses 16**

Spring	
Pharmacy 242DB, <i>Introduction to Patient Care</i>	1
Pharmacy 244C, <i>Pharmacy Administration</i>	2
Pharmacy 144P, <i>Pharmacy Administration Laboratory</i>	1
Pharmacy 251C, <i>Pharmaceutical Biochemistry II</i>	2
Pharmacy 253C, <i>Function and Anatomy of Human Systems II</i>	2
Pharmacy 253D, <i>Principles of General Pathology</i>	2
Pharmacy 153M, <i>Pharmacology Principles</i>	1
Pharmacy 356C, <i>Pharmaceutics</i>	3
Pharmacy 156P, <i>Pharmaceutics Laboratory</i>	1
Pharmacy 152H, <i>Professional Development Convocation II</i>	1

**Total,  
professional  
courses 16**

**Second Professional Year**

Fall	
Pharmacy 262D, <i>Nonprescription Pharmacotherapeutics I</i>	2
Pharmacy 163C, <i>Drug Information and Evidence-Based Practice</i>	1
Pharmacy 163P, <i>Drug Information and Evidence-Based Practice Laboratory</i>	1
Pharmacy 364D, <i>Pharmacy and the Health Care System</i>	3
Pharmacy 665E, <i>Pharmacotherapeutics I</i>	6
Pharmacy 266P, <i>Pharmacy Professional Communications</i>	2
Pharmacy 392S, <i>Patient Assessment Skills Laboratory</i>	3
Pharmacy 161H, <i>Professional Development Convocation III</i>	1

**Total,  
professional  
courses 19**

Spring	
Pharmacy 171P, <i>Integrated Basic and Applied Pharmacokinetics Laboratory</i>	1

Pharmacy 371S, <i>Integrated Basic and Applied Pharmacokinetics</i>	3			<b>Total, professional courses 6</b>
Pharmacy 172E, <i>Nonprescription Pharmacotherapeutics II</i>	1	Fall		
Pharmacy 172P, <i>Nonprescription Pharmacotherapeutics II Laboratory</i>	1		Pharmacy 693E, <i>Elective in Pharmacy Practice I</i>	6
Pharmacy 675E, <i>Pharmacotherapeutics II</i>	6		Pharmacy 693N, <i>Advanced Hospital Pharmacy Practice</i>	6
Pharmacy 175P, <i>Pharmacotherapeutics II Laboratory</i>	1		Pharmacy 693P, <i>Advanced Community Pharmacy Practice</i>	6
Pharmacy 176E, <i>Interprofessional Ethics</i>	1			<b>Total, professional courses 18</b>
Pharmacy 176P, <i>Experiential Pharmacy Practice and Patient Counseling</i>	1			
Pharmacy 277P, <i>Introduction to Clinical Skills Laboratory</i>	2	Spring		
Pharmacy 172H, <i>Professional Development Convocation IV</i>	1		Pharmacy 693S, <i>Selective in Pharmacy Practice I</i>	6
			Pharmacy 694C, <i>Acute Care Pharmacy Practice</i>	6
<b>Total, professional courses 18</b>			Pharmacy 694E, <i>Elective in Pharmacy Practice II</i>	6
Summer				<b>Total, professional courses 18</b>
Pharmacy 377H, <i>Institutional Clinical Skills</i>	3			
				<b>Total, professional courses 3</b>
<b>Third Professional Year</b>				
Fall				
Pharmacy 183F, <i>Basic Intravenous Admixtures</i>	1			
Pharmacy 183G, <i>Basic Intravenous Admixtures Laboratory</i>	1			
Pharmacy 185P, <i>Pharmacotherapeutics III Laboratory</i>	1			
Pharmacy 287H, <i>Community Care Clinical Skills</i>	2			
Pharmacy 695F, <i>Pharmacotherapeutics III</i>	6			
Pharmacy 395G, <i>Pharmacotherapeutics IV</i>	3			
Pharmacy 182H, <i>Professional Development Convocation V</i>	1			
Professional elective(s)	2			
				<b>Total, professional courses 17</b>
Spring				
Pharmacy 284E, <i>Pharmacy Law</i>	2			
Pharmacy 394F, <i>Pharmacoeconomics</i>	3			
Pharmacy 295R, <i>Advanced Evidence-Based Practice</i>	2			
Pharmacy 396D, <i>Pharmacotherapeutics of Special Populations</i>	3			
Pharmacy 194P, <i>Advanced Pharmacotherapeutics Laboratory</i>	1			
Pharmacy 192H, <i>Professional Development Convocation VI</i>	1			
Professional elective(s)	4			
				<b>Total, professional courses 16</b>
<b>Fourth Professional Year</b>				
The order in which students take the fourth-year internships is at the discretion of the College of Pharmacy.				
Summer				
Pharmacy 693C, <i>Ambulatory Care Pharmacy Practice</i>	6			

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* (<http://registrar.utexas.edu/schedules>) to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* (<http://registrar.utexas.edu/schedules>) may also reflect changes made to the course inventory after the publication of this catalog.

### Pharmacy: PHR

#### University Courses

##### PHR 310K. Drugs in Our Society.

Survey of drug development, distribution, and safety, including therapeutic categories of drugs, their actions and abuse potential, and the sociological aspects of drug use. Three lecture hours a week for one semester. Pharmacy 310K and 350K may not both be counted. Not open to students in the professional pharmacy curriculum and may not be counted toward the professional elective requirement in pharmacy.

##### PHR 119L, 219L, 319L, 419L, 519L, 619L. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. Discussion of various issues related to the academic, cultural, and personal aspects of completing academic work in international locations. For each semester hour of credit earned, one lecture hour a week for one semester. Pharmacy 119L, 219L, 319L, 419L, 519L, 619L and Undergraduate Studies 119 may not both be counted unless the topics vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only.

##### PHR 129L, 229L, 329L, 429L, 529L, 629L. International Learning Seminars.

Restricted to students participating in a Maymester Abroad course. For each semester hour of credit earned, one lecture hour a week for one semester. Pharmacy 129L, 229L, 329L, 429L, 529L, 629L and Undergraduate Studies 119 may not both be counted unless the topics

vary. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **PHR 338. Introduction to Pharmacology.**

Survey of basic concepts and principles in pharmacology. Three lecture hours a week for one semester. Required for all preprofessional students in the School of Nursing. May not be counted toward the professional elective requirement in pharmacy. Prerequisite: Credit or registration for Biology 365S, 446L (or 416K), or Kinesiology 324K.

### **PHR 350K. Drugs in Our Society.**

Survey of drug development, drug actions and abuse potential, and sociological aspects of drug use. Three lecture hours a week for one semester. Pharmacy 310K and 350K may not both be counted. Not open to students in the professional pharmacy curriculum and may not be counted toward the professional elective requirement in pharmacy. Prerequisite: Upper-division standing.

### **PHR 160J, 260J, 360J. Basic Study in Pharmaceutical Research for Nonmajors.**

Original investigation in any area of the pharmaceutical sciences. For each semester hour of credit earned, three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor and the dean.

### **PHR 361C. Introduction to Complementary and Alternative Medicine.**

Representative practices in four domains of complementary and alternative medicine (CAM): mind-body medicine, biologically based practices, manipulative and body-based practices, and energy medicine. The use of evidence-based criteria to evaluate the risks and benefits of selected complementary therapies and the challenges of building an evidence base as illustrated by landmark research studies. Also includes an experiential component to familiarize the student with fundamental CAM concepts. Three lecture hours a week for one semester. May not be counted toward the professional elective requirement. Offered on the letter-grade basis only. Prerequisite: Upper-division standing in a health-related major or consent of instructor.

## **Professional Courses**

### **PHR 320M. Pharmaceutical Marketing.**

Concepts of marketing as they apply to the pharmaceutical industry, pharmaceutical products, and the health care environment. Three lecture hours a week for one semester. Prerequisite: Pharmacy 244C and 144P.

### **PHR 321K. Introduction to Pharmaceutical Chemistry.**

Current concepts and principles fundamental to the study of the structure of matter and of its relationship to pharmaceutically significant properties. Three lecture hours a week for one semester. May not be counted toward the professional elective requirement. Prerequisite: Chemistry 310M or the equivalent.

### **PHR 322H. Research Design and Methodology.**

Concepts and procedures involved in designing and carrying out a research project. Three lecture hours a week for one semester. Prerequisite: Admission to the Pharmacy Honors Program or consent of instructor.

### **PHR 322P. New Concepts, Topics, and Issues in Pharmacy Practice.**

New concerns, topics, and issues in pharmacy practice. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 364D.

### **PHR 326C. Community Pharmacy Management.**

Advanced concepts in community pharmacy management for the student who plans to become a pharmacy owner or manager. Topics include operational, personnel, and financial management; marketing; layout and design; and the delivery of pharmaceutical care in a community pharmacy setting. Three lecture hours a week for one semester. Prerequisite: Pharmacy 244C.

### **PHR 326M. Applied Pharmacy Management.**

Organizational structure of the hospital pharmacy; principles of financial systems and personnel management. Three lecture hours a week for one semester. Prerequisite: Pharmacy 244C and 144P.

### **PHR 329C. Pharmacy Association Management.**

An introduction to the principles involved in managing pharmacy associations. Students gain practical experience in a community pharmacy. Nine hours of fieldwork a week for one semester. Pharmacy 329C and 389C may not both be counted. Prerequisite: Pharmacy 244C and 144P and consent of instructor.

### **PHR 629D. Pharmacy Association Management Residency.**

Experience working in a pharmacy association, including active involvement in some managerial aspect of the association. Eighteen hours of fieldwork a week for one semester. Pharmacy 629D and 689D may not both be counted. Prerequisite: Pharmacy 364D and consent of instructor.

### **PHR 139H. Pharmacy Administration for Honors Students.**

Each student conducts an in-depth examination of a selected issue in pharmacy administration. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program and Pharmacy 244C and 144P.

### **PHR 340D. Structure-Activity Relationships and Mechanisms of Action.**

Study of structure-activity relationships as the basis for investigation of mechanisms of drug-receptor interactions. Model compounds are selected from enkephalins, morphine-like analgesics, cholinergics, and adrenergics. Three lecture hours a week for one semester. Pharmacy 340D and 380D may not both be counted. Prerequisite: Admission to the Pharmacy Honors Program, Pharmacy 675E and 175P with a grade of at least B- in each, or consent of instructor.

### **PHR 341C. Pharmaceutical Biochemistry I.**

Basic principles of intermediary metabolism, with emphasis on defects in pathways that result in disease and on identification of molecular targets for therapeutic control. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

### **PHR 342C. Physical and Chemical Principles of Drugs.**

Fundamental, introductory principles of pharmaceuticals, including thermodynamics, kinetics, and other basic chemical principles related to drugs. Three lecture hours a week for one semester. Offered on

the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 142P.

#### **PHR 242D. Introduction to Patient Care.**

Introduction to the profession of pharmacy, including the principle of service. Includes fieldwork in a local eldercare facility. One lecture hour and up to three laboratory hours a week for two semesters; and a minimum of twelve additional hours of fieldwork to be arranged over two semesters. Pharmacy 242D and 249 may not both be counted. Offered on the letter-grade basis only. Prerequisite: For 242DA, admission to the professional pharmacy curriculum; for 242DB, Pharmacy 242DA.

#### **PHR 142H. Professional Development Convocation I.**

Professional development issues and assessments for PharmD students in the first professional year. Includes students' professional and program-specific responsibilities, such as program evaluations, portfolios, and administrative requirements; practice opportunities in pharmacy; and expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

#### **PHR 142P. Physical and Chemical Principles of Drugs Laboratory.**

Problem-based learning exercises to reinforce the material presented in Pharmacy 342C. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 342C.

#### **PHR 343C. Function and Anatomy of Human Systems I.**

Basic principles of human physiology and anatomy in relation to drug action. Includes cellular and subcellular physiology, membrane transport, electrophysiology, synaptic transmission, and autonomic, neurological, and cardiovascular physiology and anatomy. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

#### **PHR 143M. Medicinal Chemistry Principles.**

Introduction to medicinal chemistry principles. Topics include drug metabolism and the transition from organic to medicinal chemistry. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 143P.

#### **PHR 143P. Basic Pharmaceutical Sciences Laboratory.**

Laboratory exercises to support the basic pharmaceutical sciences courses. One hour of prelaboratory lecture and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum, and credit or registration for Pharmacy 143M.

#### **PHR 244C. Pharmacy Administration.**

Concepts and principles of management, and social and behavioral aspects of pharmacy practice. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum and credit or registration for Pharmacy 144P.

#### **PHR 144P. Pharmacy Administration Laboratory.**

Issues in pharmacy practice. Students discuss case studies, participate in group presentations, and work in small groups to enhance their communication and teamwork skills. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum and credit or registration for Pharmacy 244C.

#### **PHR 345L. Clinical Pharmacokinetics.**

Application of pharmacokinetic principles to the determination of proper dosing regimens. Three lecture hours a week for one semester. Prerequisite: Pharmacy 171P and 371S.

#### **PHR 149H. Pharmaceutics for Honors Students.**

Expanded study of the way principles covered in the pharmaceutical curriculum affect drug design, formulation, dosing, and pharmacokinetics/pharmacodynamics. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program and Pharmacy 252C (or 352C), 356C, and 156P.

#### **PHR 251C. Pharmaceutical Biochemistry II.**

The biosynthesis and function of macromolecules (nucleic acids, lipids, proteins, and carbohydrates); sites of drug action, immunology, and applications of biotechnology and molecular biology to the pharmaceutical sciences. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 341C.

#### **PHR 151R. Research Opportunities in the Pharmaceutical Sciences.**

An introduction to research in all divisions of the College of Pharmacy. Includes ethical issues in research, career paths in research, and topics such as choosing a research mentor or project. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

#### **PHR 252C. Biopharmaceutics.**

Complements the basic pharmaceutics principles covered in Pharmacy 342C. Subjects include core concepts in biopharmaceutics of drugs. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

#### **PHR 152H. Professional Development Convocation II.**

Professional development issues and assessments for PharmD students in the first professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 142H.

#### **PHR 253C. Function and Anatomy of Human Systems II.**

Continuation of Pharmacy 343C, with emphasis on blood pressure regulation, renal function, digestion, respiration, endocrinology, and reproduction. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 343C.



### **PHR 253D. Principles of General Pathology.**

An overview of most aspects of general pathology, including cell adaptation and injury, inflammation and tissue healing, immunopathology, neoplasia, infectious disease, cardiovascular and pulmonary diseases, and metabolic disorders. Taught via television and on-site lectures, supplemented by case presentation and specimen demonstrations in cooperation with faculty members of the University of Texas Health Science Center at San Antonio. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 343C and credit or registration for Pharmacy 253C.

### **PHR 153M. Pharmacology Principles.**

Introduction to pharmacology principles. Topics include pharmacology at the cellular and subcellular/receptor levels. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

### **PHR 356C. Pharmaceutics.**

General introduction to dosage forms; the technology and pharmaceutical rationale fundamental to their development. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 342C and 142P, and credit or registration for Pharmacy 156P.

### **PHR 156P. Pharmaceutics Laboratory.**

Laboratory course supporting the subjects discussed in Pharmacy 356C. One hour of prelaboratory lecture and three laboratory hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 356C.

### **PHR 356R. Advanced Pharmaceutical Compounding.**

Continuation of related subjects in pharmaceutical dosage forms covered in Pharmacy 356C and 156P, with emphasis on the compounding of drugs into stable delivery systems for oral and topical applications. Two lecture hours and four laboratory hours a week for one semester. Prerequisite: Pharmacy 356C and 156P.

### **PHR 358. Geriatric Pharmacy Practice.**

Social, demographic, ethical, and therapeutic issues concerning pharmaceutical products and care of the elderly. Three lecture hours a week for one semester. Prerequisite: Pharmacy 665E.

### **PHR 160K, 260K, 360K. Basic Study in Pharmaceutical Research.**

Basic exploration in any area of the pharmaceutical sciences. For each semester hour of credit earned, three laboratory hours a week for one semester. No more than three semester hours may be counted toward the professional pharmacy elective requirement. May be repeated for credit. Prerequisite: Admission to the PharmD program and consent of instructor and the dean.

### **PHR 161H. Professional Development Convocation III.**

Professional development issues and assessments for PharmD students in the second professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 152H.

### **PHR 161J, 261J, 361J. Basic Studies in the Pharmaceutical Sciences.**

Basic exploration in any area of the pharmaceutical and clinical sciences. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Admission to the professional pharmacy curriculum.

### **PHR 262D. Nonprescription Pharmacotherapeutics I.**

Study of nonprescription drugs, with emphasis on the pharmacist's consultant role in product selection. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the first professional year in the College of Pharmacy, or consent of instructor.

### **PHR 362L. Clinical Toxicology.**

A course in toxicology that focuses on common poisons and their management; designed for pharmacy students planning to enter general practice. Three lecture hours a week for one semester. Pharmacy 362L and 362M may not both be counted. Prerequisite: Admission to the professional pharmacy curriculum.

### **PHR 163C. Drug Information and Evidence-Based Practice.**

Knowledge and skills needed to retrieve and interpret drug information. Interpretation of biomedical literature and an introduction to concepts of evidence-based practice. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 242D, and credit or registration for Pharmacy 262D, 163P, and 665E.

### **PHR 263K. Veterinary Pharmacy.**

Treatment of selected disease states of domestic and exotic animals; veterinary appliances and products, including proprietary pharmaceuticals and biologicals, with their therapeutic indications and uses. Two lecture hours a week for one semester. Prerequisite: Admission to the professional pharmacy curriculum.

### **PHR 163P. Drug Information and Evidence-Based Practice Laboratory.**

Practical application of the concepts presented in Pharmacy 163C. Includes assignments, projects, and oral presentations. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 262D, 163C, and 665E.

### **PHR 364D. Pharmacy and the Health Care System.**

The health care system in the United States; principles of managed care; application of pricing policies; and an overview of pharmacy services. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 244C and 144P.

### **PHR 665E. Pharmacotherapeutics I.**

An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of adrenergic-based diseases; cholinergic-based diseases; inflammatory diseases; hypertension; acute and chronic renal disease; and cardiovascular disease, including hyperlipidemia, circulatory problems, thromboembolic disease, myocardial ischemia, myocardial infarction, congestive heart failure, and arrhythmias. Six lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 262D, 163C, 163P, and 392S.

### **PHR 165P. Pharmacotherapeutics I Laboratory.**

Problem-based laboratory course that integrates the pathophysiology, medicinal chemistry, pharmacology, and therapeutic aspects of various diseases in order to prepare students to make sound therapeutic decisions. Subjects introduced in Pharmacy 665E. Three laboratory hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 665E.

### **PHR 166H. Pharmacotherapeutic Case Studies for Honors Students.**

Students participate in ongoing pharmacy practice, clinical, pharmacy association, and research activities. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program, and Pharmacy 665E or consent of instructor.

### **PHR 266P. Pharmacy Professional Communications.**

Professional communication skills in interacting with patients and other health care professionals. One lecture hour and three laboratory hours a week for one semester, with additional hours to be arranged. Offered on the letter-grade basis only. Prerequisite: Pharmacy 242D (or 249).

### **PHR 167H. Exploratory Research in Pharmacy.**

The student participates in ongoing in-depth research activities in pharmaceuticals, medicinal chemistry, toxicology, pharmacology, pharmacy administration, pharmacy practice, or pharmacotherapy. At least seven research hours a week for one semester. May be repeated for credit. Prerequisite: Pharmacy 051R and admission to the Pharmacy Honors Program, or consent of the dean.

### **PHR 168H. Medicinal Chemistry for Honors Students.**

Expanded study of principles covered in the medicinal chemistry curriculum that concern synthetic, semisynthetic, and naturally occurring therapeutic agents. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program, and credit or registration for Pharmacy 665E or consent of instructor.

### **PHR 368T. Supervised Teaching in Pharmacy.**

Teaching under close supervision of the faculty; weekly group meetings with the appropriate instructor; individual consultations; semester reports. Three lecture hours a week for one semester. Pharmacy 368T and 398T may not both be counted. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy, or consent of instructor.

### **PHR 269S. Community Service Learning.**

Community-based participatory projects designed to connect coursework and community service experiences. Past and present health issues on the US-Mexico border and in Texas, regional and national health initiatives, service challenges and opportunities, as well as personal/professional identities and responsibilities to the community. Projects developed in consultation with a faculty mentor and a selected community site. Includes an academic service-learning component. One lecture hour and a minimum of two fieldwork hours a week at a service-learning site for one semester. Pharmacy 269S and 289 may not both be counted. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 270C. Communication Skills for Health Professionals.**

Designed for pharmacy, premedical, pre dental, and nursing students. Oral communication skills used by health professionals. Emphasis on

developing personal and professional confidence through improving oral communication skills. Small and large group presentations. Two lecture hours a week for one semester.

### **PHR 270D. Nutritional Aspects of Clinical Pharmacy.**

Explores the interrelationships of nutrition, disease, and drug therapy, including aspects of both normal and clinical nutrition, nutritional deficiencies, and the metabolic consequences or diseases associated with malnutrition. Patient case studies examine both the effects of drug therapy on nutrition and the effects of nutrition on drug therapy. Disease states covered include cardiovascular disease, diabetes, hepatic and renal failure, and anemia. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the first professional year in the College of Pharmacy.

### **PHR 270M. Inpatient Adult Medicine.**

Clinical therapeutic management of adult patients in an inpatient, institutional (primarily hospital) setting. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 270N. Introduction to Nuclear Pharmacy.**

An overview of nuclear pharmacy, a recognized specialty area of pharmacy practice focusing on the compounding and dispensing of radioactive materials for use in nuclear medicine procedures (therapeutic, diagnostic, and imaging). Two lecture hours a week for one semester. Prerequisite: Pharmacy 252C, 171P, and 371S; or consent of instructor.

### **PHR 270R. Leadership Skills.**

Development of leadership skills associated with team-based therapeutic approaches to healthcare. Designed to enhance skill sets associated with interdisciplinary and interprofessional healthcare teams. Two lecture hours a week for one semester. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 370S. Interprofessional Community Service Learning.**

Integration of community service with contemporary pharmacy practice, with a focus on social justice and social determinants of health care. Weekly online didactic modules, a minimum of fifty hours of service learning practicum with a community partner, and twice monthly group meetings. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 271C. Drug Interactions.**

Mechanisms, types, examples, and significance of drug interactions in pharmacy practice. Two lecture hours a week for one semester. Prerequisite: Pharmacy 665E, and credit or registration for Pharmacy 266P (or credit for 366P) or consent of instructor.

### **PHR 171L. Leadership in Community Service Learning.**

Designed for students enrolled in Pharmacy 370S and 381H who elect to serve in a leadership role for the community service-learning project. Involves coordination and organization of responsibilities at each phase of the project, communication with community partners, and additional outreach based on the needs of the community partner. Includes development of a plan and disseminate of the project outcomes. A minimum of six in-person meetings with the instructor, with additional meetings scheduled as needed, including online and by

telephone. Prerequisite: Credit or registration for Pharmacy 370S or 381H.

#### **PHR 171P. Integrated Basic and Applied Pharmacokinetics Laboratory.**

Problem-based and case-based application of pharmacokinetic principles to specific drugs and patient situations. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 371S.

#### **PHR 371S. Integrated Basic and Applied Pharmacokinetics.**

Introduction to pharmacokinetic principles; and the application of principles to specific drugs and patient situations. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 342C, 142p, 252c, 356C, 156P, and credit or registration for Pharmacy 171P, 675E, and 175P.

#### **PHR 172E. Nonprescription Pharmacotherapeutics II.**

Study of nonprescription drugs, with emphasis on the pharmacist's consultant role in product selection. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 262D, 392S, and credit or registration for Pharmacy 172P.

#### **PHR 172H. Professional Development Convocation IV.**

Professional development issues and assessments for PharmD students in the second professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 161H.

#### **PHR 372K. Hospital Pharmacy.**

Basic principles, standards, and procedures involved in providing professional pharmaceutical services in hospitals. Three lecture hours a week for one semester. Prerequisite: Admission to the professional pharmacy curriculum.

#### **PHR 172P. Nonprescription Pharmacotherapeutics II Laboratory.**

Laboratory practice related to the pharmacist's consultant role in over-the-counter product selection; includes fieldwork in a community pharmacy. One lecture hour and three laboratory or fieldwork hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 172E, and current intern registration with the Texas State Board of Pharmacy.

#### **PHR 173H. Pharmacology and Toxicology for Honors Students.**

Expanded study of principles covered in the pharmacology curriculum that concern mechanisms of action and toxicity of pharmacologic agents on body systems. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Admission to the Pharmacy Honors Program, and credit or registration for Pharmacy 665E or consent of instructor.

#### **PHR 274S. Quality and Patient Safety Interprofessional Education.**

Concepts of patient safety and quality improvement. Current and past quality improvement projects are used to demonstrate the model of clinical safety and effectiveness. Reducing and preventing medical errors using the TeamSTEPPS approach; working in interprofessional teams on a quality improvement project. The equivalent of two lecture hours a week for one semester. Prerequisite: Completion of the second professional year in the College of Pharmacy.

#### **PHR 675E. Pharmacotherapeutics II.**

An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the pathogenesis and treatment of bacterial, viral, and fungal infections; immunizations against bacterial and viral diseases; and allergies, asthma, and chronic obstructive pulmonary disease. Six lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 665E and credit or registration for Pharmacy 175P.

#### **PHR 175P. Pharmacotherapeutics II Laboratory.**

Problem-based laboratory that integrates the pathophysiology, medicinal chemistry, pharmacology, and therapeutic aspects of various diseases in order to prepare students to make sound therapeutic decisions. Subjects introduced in Pharmacy 665E and 675E. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 675E.

#### **PHR 176E. Interprofessional Ethics.**

Explores ethical issues in pharmacy practice and health care, with a focus on the perspectives of professionals in the fields of nursing, law, social work, and medicine. One lecture hour a week for one semester. May include five additional discussion hours. Offered on the letter-grade basis only. Prerequisite: Pharmacy 244C, 144P, 364D, and credit or registration for Pharmacy 172H, 675E, and 175P.

#### **PHR 176P. Experiential Pharmacy Practice and Patient Counseling.**

Medication use and dispensing in a practice environment. Counseling skills and techniques for a better understanding of disease states and positive medication outcomes. Three laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy, and credit or registration for Pharmacy 665E and 266P.

#### **PHR 377H. Institutional Clinical Skills.**

Hands-on experience in an institutional practice care facility; examines pharmacy services, hospital management, staff interaction, and the flow of information from laboratory to bedside. Forty hours a week for two weeks. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy, and Pharmacy 242D, 244C, 144P, 163C, 163P, 364D, 266P, 171P, 371S, 172H, 675E, 175P, 176E, and 277P (or 177G and 177P).

#### **PHR 177K, 277K, 377K. Advanced Study in Pharmaceutical Research.**

For each semester hour of credit earned, three laboratory hours a week for one semester. No more than three semester hours may be counted toward the professional pharmacy elective requirement. May be repeated for credit. Prerequisite: Second-professional-year standing and consent of instructor and the dean.

### **PHR 277P. Introduction to Clinical Skills Laboratory.**

Designed to develop the practical skills necessary in a pharmacy setting, with a focus on patient histories, how to read and interpret patient charts, adult immunizations (including APhA certification), and training and certification in CPR from American Heart Association facilitators. Laboratory includes practical application of pharmacy clinical skills. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy; Pharmacy 266P and 392S; and credit or registration for Pharmacy 675E and 175P.

### **PHR 278H. Pharmacy Honors Proposal and Tutorial Course.**

Honors seminar; development of laboratory research proposal for approval by the Honors Program Committee. One lecture hour and three hours of independent research a week for one semester. Prerequisite: Admission to the Pharmacy Honors Program.

### **PHR 479H. Pharmacy Honors Thesis and Tutorial Course.**

Honors seminar; laboratory research project conducted under the supervision of one or more faculty members. One lecture hour and nine laboratory hours a week for one semester. Prerequisite: Pharmacy 278H.

### **PHR 280H. Landmark Studies in Cardiovascular Disease.**

Evidence-based clinical studies in support of drug therapy recommendations in the treatment of cardiovascular diseases. Two lecture hours a week for one semester. Prerequisite: Second-professional-year standing in pharmacy.

### **PHR 280U. Case Studies in Emerging Infections.**

Case studies in the analysis and therapeutic control of recurring, cycling, and newly emerging infectious diseases. Two lecture hours a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy.

### **PHR 280W. Psychiatric Pharmacy Practice and Drug Treatment of Mental Disorders.**

Advanced study in the pathophysiology of selected psychiatric disease states and the clinical presentation, phenomenology, diagnosis, and treatment of these disease states. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 695F or consent of instructor.

### **PHR 381H. Interprofessional Health Care for HIV Patient Management.**

Interprofessional teamwork, health literacy, treatment guidelines, patient safety, and medication reconciliation in the care of patients with the human immunodeficiency virus. Conducted at an HIV clinic in Texas. Students complete six hours of required Web-based instruction before beginning the clinical component. Six hours of online lecture and a minimum of fifty hours of fieldwork in one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 281U. Case Studies in Diabetes Management.**

Designed to provide students with the skills and knowledge to serve as primary care providers in the area of diabetes management. Use of a case approach to discuss the management of patients with diabetes mellitus. Specific treatment modalities and management issues for the child, adolescent, adult, and elderly diabetic patient. Two lecture

hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 395G and consent of instructor.

### **PHR 182H. Professional Development Convocation V.**

Professional development issues and assessments for PharmD students in the third professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 172H.

### **PHR 282Q. Pediatric Pharmacotherapy.**

Pathophysiology and pharmacotherapy of selected pediatric diseases. Designed to expose students to pediatric pharmacy as a potential area of focus, and to prepare them for a potential residency or practice in providing pharmaceutical care in a pediatric setting. Two lecture hours a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy.

### **PHR 382U. Medicinal Herbs and Phytomedicine.**

The emerging role of medicinal natural products in pharmacy; the role of the pharmacist in the therapeutic use of herbs as controlled products and for self-medication. Three lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.

### **PHR 183F. Basic Intravenous Admixtures.**

Basic principles of injectable and other sterile dosage forms; methods of preparation and evaluation that meet current pharmacy practice standards. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 356C, 156P, and credit or registration for Pharmacy 183G.

### **PHR 183G. Basic Intravenous Admixtures Laboratory.**

Basic laboratory principles in the preparation and evaluation of injectable and other sterile dosage forms. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 356C, 156P, and credit or registration for Pharmacy 183F.

### **PHR 283H. Advanced Pharmacotherapeutics.**

Advanced study of organ systems; pharmacotherapy and clinical pharmacokinetics. Two lecture hours a week for one semester. May be counted as a pharmacy honors elective. Prerequisite: Admission to the PharmD program.

### **PHR 283U. Multidisciplinary Pain Management.**

Problem-based instruction to help health professions students acquire knowledge and skills in the care of patients with acute and chronic pain. Taught by faculty members in medicine, pharmacy, and nursing. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Consent of instructor.

### **PHR 384D. Antimicrobics: Mechanism of Action and Clinical Use.**

Mechanisms of antimicrobial activity and the development of bacterial resistance, and their relationship to clinical therapy. Three lecture hours a week for one semester. Pharmacy 384D and 484H may not both be counted. Prerequisite: Pharmacy 675E and 175P.



### **PHR 284E. Pharmacy Law.**

State and federal pharmacy laws. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 484H. Antimicrobics: Mechanism of Action and Clinical Use for Honors Students.**

Bacteriostatic and bacteriocidal mechanisms of antimicrobial agents, bacterial mechanisms of resistance, and the critical evaluation of drug therapy in various clinical settings. Designed to give students additional insight into the development of antimicrobial agents and the interactions of these agents with each other, the pathogen, and the patient. Three lecture hours a week for one semester, with at least fifteen additional hours to be arranged. Pharmacy 384D and 484H may not both be counted. Prerequisite: Admission to the Pharmacy Honors Program and Pharmacy 675E and 175P.

### **PHR 185P. Pharmacotherapeutics III Laboratory.**

Problem-based laboratory that integrates the pathology, medicinal chemistry, pharmacology, and therapeutic aspects of various diseases in order to prepare students to make sound therapeutic decisions. Subjects introduced in Pharmacy 665E, 675E, 695F, and 395G. Three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 675E and 175P, and credit or registration for Pharmacy 695F and 395G.

### **PHR 285Q. Fluid and Electrolyte Therapy.**

Clinical management of disorders of fluid, electrolytes, and acid-base balance in patients with normal and abnormal homeostatic mechanisms; includes basic concepts of parenteral nutrition support. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.

### **PHR 285V. Mexican Drugs and Products.**

Analysis of Mexican pharmacy practice, drugs, and products; implications for the pharmacist in the United States. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.

### **PHR 286C. Treatment of Cardiovascular Disease.**

Further development of topics covered in Pharmacy 665E; discussion of such additional topics as assessment of cardiac function and nonmedical management of cardiovascular diseases. Two lecture hours a week for one semester. Prerequisite: Credit or registration for Pharmacy 185P, 695F, and 395G.

### **PHR 386G. Spanish for the Pharmacy Professional.**

Intermediate communication skills in Spanish. Three lecture hours a week for one semester. Prerequisite: Completion of the second professional year in the College of Pharmacy, and one year of college-level Spanish or consent of instructor.

### **PHR 187D. Case Studies in Cardiovascular Disease.**

Review of case studies of patients with cardiovascular diseases, with emphasis on development of appropriate treatment and monitoring plans. One lecture hour a week for one semester. Prerequisite: Completion of the second professional year in the College of Pharmacy.

### **PHR 287H. Community Care Clinical Skills.**

Clinical work in a community-based pharmacy practice setting. Students receive medication therapy management training, participate in the development of patient care plans, and write an essay about the clinical experience. Five hours of fieldwork a week for one semester. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy, and Pharmacy 163C, 163P, 364D, 266P, 172E, 172P, 176E, 277P (or 177G and 177P), and 392S.

### **PHR 187J, 287J, 387J. Advanced Problems in Pharmacy Education.**

Laboratory course examining professional education issues and techniques for students exploring an academic career. At least three, six, or nine laboratory hours a week for one semester. Prerequisite: Completion of all first-year professional coursework and consent of the dean.

### **PHR 390T. Pharmacy International Exchange.**

Work in an exchange program with international colleges and schools of pharmacy as partners. Examination of similarities and differences between pharmacy education, professional practice, and/or research in the hosting country and in the United States. Forty hours of fieldwork a week for one semester. Prerequisite: Completion of the first professional year in the College of Pharmacy and consent of instructor.

### **PHR 292G. Introduction to Botanicals and Nutraceuticals.**

An introduction to the framework of biologically based complementary and alternative medicine practices. Examines the most commonly used botanicals and nutritional supplements; includes popular uses, clinical indications, pharmacological effects, mechanisms of action, side effects, contraindications, and common dosage guidelines. Emphasis on how to access and interpret continuously emerging evidence in this field and how to use this information to guide and monitor patients within the context of a pharmacy practice. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Credit or registration for Pharmacy 185P, 695F, 395G.

### **PHR 192H. Professional Development Convocation VI.**

Professional development issues and assessments for PharmD students in the third professional year. Student fulfillment of professional and program-specific responsibilities (program evaluations, portfolios, administrative requirements), practice opportunities in pharmacy, and addressing the expected areas and levels of professional growth as the student advances through the curriculum. One lecture hour a week for a semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 182H.

### **PHR 392S. Patient Assessment Skills Laboratory.**

Introduction to patient assessment techniques and to the skills needed to provide pharmaceutical care. Two lecture hours and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy, and Pharmacy 253C and 253D.

### **PHR 693C. Ambulatory Care Pharmacy Practice.**

Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in the context of ambulatory patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and

completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 693E. Elective in Pharmacy Practice I.**

Experience in pharmacy practice, research, or administration. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 693N. Advanced Hospital Pharmacy Practice.**

Analysis of pharmacotherapy, evaluation of drug use, synthesis of rational drug regimens, and dispensing of medications in the context of institutional patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 693P. Advanced Community Pharmacy Practice.**

Analysis of pharmacotherapy, evaluation of drug use, synthesis of rational drug regimens, and dispensing of medications in the context of community-based patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 693S. Selective in Pharmacy Practice I.**

Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in a selected pharmacy practice environment. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 693W. Elective International Pharmacy Experience.**

Competitive placement for an international advanced pharmacy experience. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 694C. Acute Care Pharmacy Practice.**

Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in the context of acute patient care. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 694E. Elective in Pharmacy Practice II.**

Experience in pharmacy practice, research, or administration. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and

completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 394F. Pharmacoeconomics.**

Terms, concepts, procedures, methods, problems, and strengths associated with pharmacoeconomics. Three lecture hours a week for one semester. Pharmacy 393T and 394F may not both be counted. Offered on the letter-grade basis only. Prerequisite: Pharmacy 364D or consent of instructor.

#### **PHR 194P. Advanced Pharmacotherapeutics Laboratory.**

Using classroom simulations, provides students with opportunities to practice their skills in interacting with patients and other healthcare professionals and communicating information regarding contemporary therapeutic regimens. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 185P, 695F, and 395G.

#### **PHR 694S. Selective in Pharmacy Practice II.**

Analysis of pharmacotherapy, evaluation of drug use, and synthesis of rational drug regimens in selected pharmacy practice environments. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 695E. Elective in Pharmacy Practice III.**

Experience in pharmacy practice, research, or administration. Forty laboratory hours a week for at least six weeks, with additional hours to be arranged. Offered on the pass/fail basis only. Prerequisite: Current intern registration with the Texas State Board of Pharmacy and completion of all didactic and laboratory coursework prior to the fourth professional year in the College of Pharmacy.

#### **PHR 695F. Pharmacotherapeutics III.**

An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of neurological, psychiatric, and developmental disorders. Also includes therapeutics of pain management, anesthesia, chemical dependence, and oncology. Six lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 675E and 175P, and credit or registration for Pharmacy 185P and 395G.

#### **PHR 395G. Pharmacotherapeutics IV.**

An integrated approach (pathophysiology, medicinal chemistry, pharmacology, and therapeutics) to the etiology and treatment of hormonal disorders and gastrointestinal disorders. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 675E and 175P, and credit or registration for Pharmacy 185P and 695F.

#### **PHR 295R. Advanced Evidence-Based Practice.**

Research methodology and biostatistical concepts as they relate to the interpretation and critical evaluation of biomedical literature. Designed to build upon the material covered in Pharmacy 163C. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 163C, 163P, 185P, 695F, and 395G.

#### **PHR 396D. Pharmacotherapeutics of Special Populations.**

Topics include geriatrics, pediatrics, pharmacogenomics, transplant patients, and under-served populations. Three lecture hours a week

for one semester. Offered on the letter-grade basis only. Prerequisite: Pharmacy 371S, 171P, 172E, 172P, 185P, 695F, and 395G.

## Graduate Courses

### PHR 480F. Biomedical Pharmacology I.

Basic neurotransmission and pharmacological principles. Physiological effects of drugs used in disease states including neurological, cardiovascular, psychiatric disorders, and pain relief. Four lecture hours a week for one semester. Neuroscience 380F and Pharmacy 380F, 480F may not both be counted. Offered on the letter-grade basis only. Prerequisite: Graduate standing, and experience or prior coursework in physiology, biochemistry, or organic chemistry.

### PHR 180J, 280J, 380J. Advanced Pharmaceutics: Laboratory Research.

Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

### PHR 180M, 280M, 380M. Advanced Pharmaceutics.

The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

### PHR 480N. Biomedical Pharmacology II.

Fundamental concepts of pharmacology, including molecular mechanisms of drug action, absorption, distribution and elimination, tolerance, dependence, mutagenesis, teratogenesis, and carcinogenesis. Four lecture hours a week for one semester. Neuroscience 380N and Pharmacy 380N, 480N may not both be counted. Offered on the letter-grade basis only. Prerequisite: Graduate standing, and Pharmacy 480F (or 380F) or consent of instructor.

### PHR 380Q. Advanced Pharmaceutical Processing.

Didactic and laboratory exposure to pharmaceutical processes used in the design, development, and optimization of drug delivery systems. Emphasis on equipment and machinery used in pharmaceutical manufacturing of these dosage forms, with discussion of other issues, such as technology transfer and scale-up. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing in pharmacy.

### PHR 381D. Product Development.

Applications of physical-chemical principles to the formulation and development of stable and bioavailable drug delivery systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing in the College of Pharmacy.

### PHR 381E. Advanced Hospital Pharmacy.

An in-depth analysis of the operation and administration of the institutional pharmacy and its relationship to the total functioning of the hospital. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

### PHR 381G. Advanced Manufacturing Pharmacy.

Physical-mechanical properties of compacts, drugs, and polymers. Properties of biodegradable and nonbiodegradable polymers in pharmaceutical formulations. Process validation and pilot plant scale-up. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

### PHR 181J, 281J, 381J. Advanced Pharmacy Administration: Laboratory Research.

Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

### PHR 181M, 281M, 381M. Advanced Pharmacy Administration.

One, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

### PHR 381N. Managed Health Care Systems.

Overview of the health care system in the United States and examination of the classic and contemporary literature on managed health care systems, with emphasis on pharmacy-related issues. Studies the advantages, disadvantages, and effects of these systems on patients, providers, and payers. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

### PHR 381P. Health Care Administration.

Introduction to the United States health care system and its relationship to pharmacy; comparison with health care in other countries. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

### PHR 381V. Communication Skills for Translational Scientists.

Oral and written communication skills for scientists conducting translational research at the interface of basic and clinical science. Subjects include effective interaction on multidisciplinary research teams and the preparation of translational research proposals. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

### PHR 381W. Molecular Biology in Translational Research.

Molecular biology methods at the interface of clinical and basic pharmaceutical sciences, especially those used in translational research in drug discovery and development, including clinical trials. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

### PHR 382C. Chemistry of Natural Products.

Chemical, biochemical, and stereochemical relationships among polyketide, terpenoid, shikimate, and alkaloid natural products and medically important analogs. Three lecture hours a week for one semester. Pharmacy 332C and 382C may not both be counted. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

### PHR 282J. Advanced Pharmacotherapy Seminar.

Discussion of advanced pharmacotherapeutics topics, case presentations, and journal clubs at the advanced practitioner level. Two lecture hours a week for two semesters. Prerequisite: Graduate standing and consent of instructor.

### PHR 382L. Drug Literature Evaluation.

Prepares the student for efficient utilization, critical evaluation, and clinical application of the current drug literature. Two lecture hours and

three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

#### **PHR 382N. Computer-Assisted Kinetics.**

Quantitative and simulation treatment of kinetics through computer technology. Topics include protein binding and utilization of program packages such as NONLIN, RSSL, CSMP, SAAM 23, and AUTOAN. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Pharmacy 252C (or 352C) or the equivalent.

#### **PHR 382R. Recent Advances in Pharmaceutics.**

Presentation of topics of current research interest in physical pharmacy, biopharmaceutics, and pharmacokinetics. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

#### **PHR 382S. Advanced Biopharmaceutics.**

Provides the student with a more comprehensive background in biopharmaceutics and mathematical techniques used in pharmacokinetics. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Pharmacy 252C (or 352C) or the equivalent.

#### **PHR 382V. Pharmaceutical Biotechnology.**

Applications of protein, oligonucleotide, and related molecules as therapeutic agents: stability, formulation, kinetics, dynamics. Three lecture hours a week for one semester. Prerequisite: Graduate standing; and the following coursework: Chemistry 339K, and Pharmacy 342C, 142P, and 252C (or 352C); or the equivalent; or consent of instructor.

#### **PHR 182W. Ethics in Science and Clinical Practice.**

Ethical considerations in the conduct of clinical research, including institutional review boards, adherence to protocol, Food and Drug Administration and related site reviews, protection of human subjects through informed consent and confidentiality, and the use of genetic banks in research. One lecture hour a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 183C. Basic Pharmacology Concepts.**

A systematic presentation of pharmacologic agents based on drug-group classification; emphasis on pharmacological mechanisms of action and toxicity. Covers basic pharmacological principles. One lecture hour a week for one semester. Prerequisite: Graduate standing.

#### **PHR 383D. Neuropharmacology.**

An advanced survey of neurotransmitters and systems in the brain. Covers experimental approaches and pharmacological analysis at behavioral, neurochemical, and neuroanatomical levels to determine mechanisms of actions of drugs that act on the brain. Three lecture hours a week for one semester. Neuroscience 383D and Pharmacy 383D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 283L. Clinical Skills Laboratory.**

Introduction to patient assessment techniques and to the skills needed to provide innovative patient care services. One lecture hour and three laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

#### **PHR 383M. Pharmacogenetics.**

The study of those combined genetic and pharmacological factors that give rise to many unexpected, untoward, and idiosyncratic drug

reactions. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 383N. Solution Theory and Disperse Systems.**

The theory and technology of solutions and heterogeneous systems; applications of scientific principles to the design of pharmaceutical products; a study of factors influencing physical chemical characteristics, stability, and biopharmaceutical activity of solutions and coarse dispersions; review of recent literature. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 383P. Advanced Pharmacokinetics.**

Study of the kinetics of absorption, distribution, metabolism, and excretion of drugs in the intact organism. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and Pharmacy 252C (or 352C) or an equivalent pharmacokinetics course.

#### **PHR 383Q. Statistics in Translational Science.**

Pharmaceutical statistical analysis with a focus on choosing the appropriate statistical test to address both basic science and clinical research hypotheses. Students use the JMP 7 software package to execute statistical analysis on their own pharmaceutical research projects. Two lecture hours and one and one-half laboratory hours a week for one semester. Pharmacy 383Q and 284V may not both be counted. Prerequisite: Graduate standing in the College of Pharmacy, and an introductory statistics course or consent of instructor.

#### **PHR 383R. Rate Processes in Pharmaceutical Systems.**

A study of decomposition and stabilization of drug molecules in solutions and in solid dosage forms; principles of kinetics and diffusion as applied to pharmaceutical systems. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 283S. Clinical Toxicology.**

An advanced study of toxicological, pharmaceutical, and pharmacological principles underlying the management of chemical poisoning. Includes analysis of selected cases. Two lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

#### **PHR 383V. Research Design and Methods.**

A practical approach to classical and experimental design. Hypothesis generation, experimental design that uses translational research methods (such as incorporating basic and clinical science), grantsmanship, and protocol development. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 383W. Biopharmaceutical Analysis.**

Analytical methods for the isolation and identification of drugs and their metabolites, specific genes, and proteins in biological fluids. Three lecture hours a week for one semester. Prerequisite: Graduate standing in pharmacy, completion of a PharmD degree, and concurrent enrollment in Pharmacy 184U.

#### **PHR 384K. Fundamentals of Toxicology.**

An organ system approach to advanced topics in general toxicology. Three lecture hours a week for one semester. Required of pharmacology and toxicology graduate students specializing in



toxicology. Prerequisite: Graduate standing, and some background in pharmacology or consent of instructor.

#### **PHR 384N. Social Issues in Pharmacy.**

In-depth analysis of the social and behavioral issues that affect medication use, using the content, theories, and methodologies associated with patient compliance research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

#### **PHR 284R. Advances in Molecular Pharmacology.**

A molecular pharmacological perspective on recent advances in cloning, sequencing, expression, function, and regulation of cell surface receptors. Two lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing, and Pharmacy 183C or consent of instructor.

#### **PHR 384S. Introduction to Epidemiology and Pharmacoepidemiology.**

Principles of epidemiology; descriptive, analytic, and clinical epidemiology; epidemiologic perspective for health care management; epidemiology and the public policy process; pharmacoepidemiology. Three lecture hours a week for one semester. Prerequisite: Graduate standing; with consent of instructor, may be taken by students in the professional pharmacy curriculum.

#### **PHR 184U. Biopharmaceutical Analysis Laboratory.**

Analytical methods for the isolation and identification of drugs and their metabolites, specific genes, and proteins in biological fluids. One hour of prelaboratory lecture and three laboratory hours a week for one semester. Prerequisite: Graduate standing in pharmacy, completion of a PharmD degree, and concurrent enrollment in Pharmacy 383W.

#### **PHR 184W. Behavioral and Neurochemical Analyses of Drug Self-Administration.**

Behavioral and neurochemical changes associated with the intake of alcohol, cocaine, and other abused substances. Uses classic studies and recent published articles. One lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

#### **PHR 185D. Responsible Conduct of Science.**

Ethical considerations in the conduct of science, including issues of animal welfare, data analysis, fraud, publications, misconduct, intellectual property, grants, peer review, and mentor responsibility. One lecture hour a week for one semester. Neuroscience 185D and Pharmacy 185D may not both be counted. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and admission to the doctoral program in pharmacy or consent of instructor.

#### **PHR 185J, 285J, 385J. Advanced Pharmacotherapy Laboratory Research.**

Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 385L. Clinical Pharmacokinetics.**

In-depth analysis of pharmacotherapeutic regimens, using complex mathematical models. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 385M. Advanced Pharmacokinetics and Pharmacodynamics.**

Continuation of Pharmacy 385L. Advanced pharmacokinetic and pharmacodynamic concepts and their application. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing, Pharmacy 385L, and consent of instructor.

#### **PHR 185W, 285W, 385W. Advanced Topics in Pharmacotherapy.**

The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; additional prerequisites vary with the topic.

#### **PHR 186J, 286J, 386J. Advanced Medicinal Chemistry: Laboratory Research.**

Modern laboratory techniques used in medicinal and natural products chemistry. Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 186K, 286K, 386K. Advanced Medicinal Chemistry.**

The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

#### **PHR 386M. Pharmaceutical Distribution.**

An introduction to the discipline of marketing as it applies to the practice of pharmacy and the pharmaceutical industry. Designed to help students develop analytical skills, strategic thinking, and creativity that can be used to accomplish marketing objectives. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 186N, 286N, 386N, 486N. Topics in Pharmacy.**

Current issues in translational science. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and admission to the Doctor of Philosophy in Translational Science degree program.

#### **PHR 386Q. Preclinical and Clinical Drug Development.**

Principles of preclinical research, including animal handling and experimental design, and clinical considerations for the Food and Drug Administration (FDA) drug approval process. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

#### **PHR 387C. Advanced Institutional Pharmacy Management.**

Management principles, practices, and problems as they apply to the provision of pharmacy products and services within a health care organization. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

#### **PHR 287F. Advanced Pharmaceutical Literature Review and Interpretation.**

Evaluation and critical review of current literature in the pharmaceutical sciences and other relevant fields. Students give presentations and participate in discussions. Two lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

**PHR 487Q. Communication Skills for Scientists.**

Designed to enhance written and oral communication skills through lectures and practice. Covers grant writing, journal paper writing, poster presentation writing, and delivery. Four lecture hours a week for one semester. May not be counted by students with credit for Pharmacy 280E and 287G. Offered on the letter-grade basis only. Prerequisite: Graduate standing in pharmacy, neuroscience, or a biological science. Additional prerequisite for international students: Completion of the University's English Certification Program or consent of instructor.

**PHR 388C. Introductory Bioorganic Chemistry.**

Survey of enzyme-catalyzed reactions, with emphasis on mechanism, experimental design, and applications in natural products biosynthesis. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

**PHR 388D. Advanced Bioorganic Chemistry.**

The chemical biology of signaling pathways, protein-protein interactions, and DNA-small molecule interactions. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

**PHR 188J, 288J, 388J. Advanced Pharmacology: Laboratory Research.**

Three, six, or nine laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and consent of instructor.

**PHR 188K, 288K, 388K. Advanced Pharmacology.**

The equivalent of one, two, or three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor; additional prerequisites vary with the topic.

**PHR 389C. Pharmacy Association Management.**

An introduction to the principles involved in managing pharmacy associations. Nine hours of fieldwork a week for one semester. Pharmacy 329C and 389C may not both be counted. Prerequisite: Graduate standing and consent of instructor.

**PHR 689D. Pharmacy Association Management Residency.**

Experience working in a pharmacy association, including active involvement in some managerial aspect of the association. Twenty hours of fieldwork a week for one semester. Pharmacy 629D and 689D may not both be counted. Prerequisite: Graduate standing and consent of instructor.

**PHR 389J. Advanced Pharmacotherapeutics of Cardiovascular Disorders.**

Provides the student with a sound knowledge and comprehension of contemporary pharmacotherapeutic regimens used in treating cardiovascular diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

**PHR 389P. Advanced Pharmacotherapeutics of Infectious Diseases.**

Provides the student with a sound knowledge and comprehension of contemporary therapeutic principles used in treating infectious diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

**PHR 189Q. Seminar in Alcohol Studies.**

Presentations and discussion of current research topics in alcohol studies. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

**PHR 389S. Advanced Pharmacotherapeutics of Hematology/Oncology.**

Provides the student with a sound knowledge and comprehension of contemporary therapeutic principles used in treating hematologic and malignant diseases. Three lecture hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

**PHR 190G, 290G, 390G, 490G. Advanced Pharmacotherapeutics of Human Diseases and Illnesses.**

A comprehensive analysis of disease processes and a determination of appropriate therapeutic interventions for the treatment of those diseases. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

**PHR 190H. Advanced Pharmaceutics Research Conference.**

One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

**PHR 390J. Pharmacy Administration Data Analysis.**

Statistical analysis of research data using the computer and various statistical software programs. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and an introductory course in statistics or consent of instructor.

**PHR 390K. Experimental Design and Research Methodology in Pharmacy Administration.**

Principles and procedures of experimental, quasi-experimental, and non-experimental research designs; includes reliability, validity, data collection methods, qualitative study designs, and survey methodologies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

**PHR 390N. Biochemical and Molecular Toxicology.**

Discussion of the mechanisms of selected drugs and toxicants. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Pharmacy 384K.

**PHR 190R, 290R, 390R. Special Problems in Pharmacotherapy.**

Individual supervision of research problems in the clinical pharmacy sciences, including pharmacokinetics, pharmacodynamics, efficacy, safety, and pharmaceutical care. For 190R, three laboratory hours a week for one semester; for 290R, five laboratory hours a week for one semester; for 390R, nine laboratory hours a week for one semester.

May be repeated for credit when the topics vary. Prerequisite: Graduate standing and consent of instructor.

### **PHR 390U. Advanced Research Methods in Pharmacy Administration.**

Advanced methodologies used in pharmacy administration research; designed to build upon the skills covered in Pharmacy 390K. Explores data management issues and statistical procedures, with emphasis on the application of research methodology concepts and principles. Three lecture hours a week for one semester. Prerequisite: Graduate standing and Pharmacy 390K.

### **PHR 491G. Advanced Hematology and Oncology Seminar.**

In-depth discussion of the contemporary pharmacotherapy and patient care relating to hematology, oncology, and bone marrow transplantation. Two lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 491GA, graduate standing and consent of instructor; for 491GB, Pharmacy 491GA.

### **PHR 191H. Advanced Pharmacy Administration Research Conference.**

One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

### **PHR 391J. Methods in Clinical Psychopharmacology and Mental Health Outcomes Research.**

Principles of research methodology in clinical psychopharmacology and mental health outcomes research, including both prospective and retrospective research design for effectiveness and outcomes studies. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

### **PHR 191Q. Pharmacy and Its Disciplines.**

An overview of pharmacy and its primary disciplines of pharmaceuticals, medicinal chemistry, pharmacy administration and practice, pharmacotherapy, and pharmacology/toxicology. One lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

### **PHR 292E. Clinical Research Methods I.**

Defining a research question, general study design issues, cross-sectional and case-control studies, and diagnostic test evaluation. Two lecture hours a week for a semester. Prerequisite: Graduate standing.

### **PHR 292F. Clinical Research Methods II.**

Prospective observational studies; randomized controlled trials; nonrandomized intervention studies; meta-analysis; and data synthesis, evaluation, and application. Two lecture hours a week for a semester. Prerequisite: Graduate standing, and Pharmacy 292E or consent of instructor.

### **PHR 092T. Joint PhD Program with Partner Institutions.**

Translational Science study at partner Institutions. May not be taken concurrently with another course at the University of Texas at Austin. Prerequisite: Graduate standing and admission to the Doctor of Philosophy in Translational Science degree program.

### **PHR 693. Research in Pharmacy.**

The equivalent of three lecture hours a week for two semesters. May not be counted toward the master's degree. May be repeated for credit

when the topics vary. Prerequisite: For 693A, graduate standing; for 693B, Pharmacy 693A.

**Topic 1: Research in Medicinal Chemistry.**

**Topic 2: Research in Pharmaceuticals.**

**Topic 3: Research in Pharmacology.**

**Topic 4: Research in Pharmacy.**

**Topic 5: Research in Pharmacy Administration.**

**Topic 6: Research in Toxicology.**

### **PHR 493D. Computer-Assisted Drug Design.**

Overview of theory and application of methods useful for computer-assisted drug design, such as molecular orbital calculations, molecular mechanics and dynamics, conformational search, CoMFA, and three-dimensional searching. Hands-on experience with professional-level software and hardware. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: Graduate standing, consent of instructor, and an undergraduate course in physical chemistry.

### **PHR 393Q. Health-Related Quality of Life Measurement.**

Terms, concepts, procedures, methods, problems, and strengths associated with health-related quality of life (HRQOL) research. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

### **PHR 693R, 993R. Postdoctoral Residency Internship.**

Pharmacy practice, research, and/or administration. At least forty hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, admission to the College of Pharmacy Residency Training Program, and completion of a PharmD degree.

### **PHR 393T. Pharmacoeconomics.**

Terms, concepts, procedures, methods, problems, and strengths associated with pharmacoeconomics. Three lecture hours a week for one semester. Pharmacy 393T and 394F may not both be counted. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

### **PHR 193U, 293U, 393U, 693U, 993U. Pharmacotherapy Master's Mentorship.**

Experience in pharmacy practice, research, and/or administration. For each semester hour of credit earned, three hours of fieldwork a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.

### **PHR 394D. Interfacial Phenomena in Pharmaceuticals.**

Phase interfaces, monolayers, bilayers, and nonlamellar surfactant assemblies in terms of thermodynamics, dynamic properties, stability, permeability, and measurement methods. Three lecture hours a week for one semester. Prerequisite: Graduate standing and a course in physical chemistry.

### **PHR 395D. Pathophysiology.**

Structure, function, and mechanisms of disease production in human organ systems. Three lecture hours a week for one semester. Nursing 396C and Pharmacy 395D may not both be counted. Prerequisite: Graduate standing.

**PHR 195H. Advanced Pharmacotherapy Research Conference.**

One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

**PHR 196H. Advanced Medicinal Chemistry Research Conference.**

One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

**PHR 396M. Medicinal Chemistry: General Principles, Pharmacological Classification, and Mechanism of Action.**

Introduction to medicinal chemistry, covering drug classes according to their pharmacological classification, structural class, and mechanism of action. Three lecture hours a week for one semester. Prerequisite: Graduate standing and undergraduate coursework in organic chemistry and biochemistry.

**PHR 196S. Seminar in Pharmacy.**

The equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in pharmacy.

**PHR 196T. Seminar in Toxicology.**

Presentations and discussion of current research topics in toxicology. One lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing, and admission to the Toxicology Training Program or consent of instructor.

**PHR 697. Hospital Pharmacy Residency.**

Not less than 1,920 hours of satisfactorily supervised work in an approved hospital pharmacy. A report of the activities of the internship must meet the approval of the student's supervisory committee. The equivalent of three lecture hours a week for two semesters. Prerequisite: For 697A, graduate standing in pharmacy and a Bachelor of Science in Pharmacy; for 697B, Pharmacy 697A.

**PHR 397C. Pharmacy and Health Care Economics.**

The economist's approach to pharmacy and health care issues, its insights and disadvantages. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

**PHR 397D. Human Resource Management.**

The elements of supervising pharmacists and technicians in pharmacy environments. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

**PHR 397E. Financial Management for Pharmacy Managers.**

Concepts, principles, and theoretical foundations of financial statements, with emphasis on the pharmacy manager's understanding of accounting procedures and the use of financial statements. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

**PHR 397F. Analytical Methods in Pharmacy Management.**

How computers are used to establish a database, analyze the data, and develop managerial projections based on the data analyses. Emphasis on developing budgets, managing inventory, monitoring productivity and workload, and managing the development of projects and systems. Three lecture hours and three laboratory hours a week

for one semester. Prerequisite: Graduate standing and consent of instructor.

**PHR 397G. Advanced Community Pharmacy Management.**

Management principles, practices, and problems as they apply to the provision of pharmacy products and services in the community pharmacy setting. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

**PHR 197H. Advanced Pharmacology Research Conference.**

One lecture hour a week for one semester. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Graduate standing.

**PHR 397J. Advanced Problems in Pharmacy Management.**

The application of problem-solving techniques to a current problem in community or institutional pharmacy management. Students develop a proposal and a report addressing an identified problem. Twelve laboratory hours a week for one semester. Prerequisite: Graduate standing and consent of instructor.

**PHR 397K. Communication Skills for Pharmacy Managers.**

Written and oral communication skills and techniques for pharmacists at the managerial level. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

**PHR 397M. Drug Design and Synthetic Strategy.**

A multiperspective approach to modern concepts in drug design and synthetic strategy. Three lecture hours a week for one semester. Prerequisite: Graduate standing, and undergraduate courses in organic chemistry and biochemistry or consent of instructor.

**PHR 197S. Seminar in Pharmacotherapy: Advanced Topics.**

The equivalent of one lecture hour a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing and consent of instructor.

**PHR 698. Thesis.**

The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in pharmacy and consent of the graduate adviser; for 698B, Pharmacy 698A.

**PHR 398R. Master's Report.**

Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in pharmacy, admission to the Option II program for the Master of Science in Pharmacy degree, and consent of the graduate adviser.

**PHR 398T. Supervised Teaching in Pharmacy.**

Teaching under close supervision of the faculty; weekly group meetings with the appropriate instructor; individual consultations; semester reports. Three lecture hours a week for one semester. Pharmacy 368T and 398T may not both be counted. Offered on the letter-grade basis only. Prerequisite: Graduate standing and consent of instructor.



**PHR 399R, 699R, 799R, 899R, 999R. .**

Offered on the credit/no credit basis only.

**PHR 399W, 699W, 799W, 899W, 999W. .**

Offered on the credit/no credit basis only.

# Lyndon B. Johnson School of Public Affairs

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Robert Hutchings, PhD, *Dean*  
Chandler Stolp, PhD, *Associate Dean*  
<http://www.utexas.edu/lbj/>

The Lyndon B. Johnson School of Public Affairs offers the Master of Global Policy Studies, the Master of Public Affairs, and the Doctor of Philosophy with a major in public policy. Information is given in the *Graduate Catalog* about these programs and about the requirements for admission to graduate study.

In addition to the graduate courses described in the *Graduate Catalog* (<http://registrar.utexas.edu/catalogs>), the faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* (<http://registrar.utexas.edu/schedules>) to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* (<http://registrar.utexas.edu/schedules>) may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://registrar.utexas.edu/catalogs>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course; if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

## Public Affairs: P A

### Lower-Division Courses

#### P A 310C. Public Policy.

Skill topics, including economics, quantitative methods, public financial management, policy development, and public administration. Three lecture hours a week for one semester. Public Affairs 310C and 330C may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

#### P A 310S. Public Policy Seminar.

Seminar with topics related to domestic or international public policy. Three lecture hours a week for one semester. Public Affairs 310S and 330S may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

### Upper-Division Courses

#### P A 325. Topics in Policy.

Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

#### P A 330C. Public Policy.

Skill topics, including economics, quantitative methods, public financial management, policy development, and public administration. Three lecture hours a week for one semester. Public Affairs 310C and 330C may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

#### P A 330S. Public Policy Seminar.

Seminar with topics related to domestic or international public policy. Three lecture hours a week for one semester. Public Affairs 310S and 330S may not both be counted unless the topics vary. May be repeated for credit when the topics vary.

# School of Social Work

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Luis H. Zayas, PhD, *Dean*

A. James Schwab, PhD, *Associate Dean, Academic Affairs*

Vicki Packheiser, MSW, LCSW, *Assistant*

*Dean, Undergraduate Programs*

<http://www.utexas.edu/ssw/>

## General Information

### Accreditation

The Bachelor of Social Work degree program is accredited by the Council on Social Work Education.

### Mission

The School of Social Work provides professional education and leadership in social work practice, research, and service to promote social and economic justice, enhance social welfare, and build strong community-University partnerships.

The mission of the Bachelor of Social Work program is to prepare students as beginning level generalist professional social work practitioners who are committed to the provision of services that further the well-being of people and who promote social and economic justice. Building on a broad liberal arts framework, the BSW curriculum is designed to develop generalist practitioners who have an understanding of social work knowledge and values and are able to select different methods and resources to meet identified client needs, while recognizing and engaging the strengths of the client in the process. The curriculum offers students the opportunity to learn to promote, restore, maintain, and enhance the social functioning of multiple levels of systems in the environment, including individuals, families, small groups, organizations, and communities; to recognize worker and client limitations; and to know when to refer clients to other resources.

The BSW student is given the opportunity to learn to work collaboratively in a variety of settings using an ecosystems/developmental perspective; to recognize the relationships between client needs and public issues; to work toward the development of social policies, resources, and programs that meet basic human needs and empower at-risk groups; and to be sensitive to the diversities among individuals, including ethnicity, gender, age, sexual orientation, religion, and ability. The program is intended to prepare reflective, self-evaluating practitioners who have a strong identification with the social work profession and work to alleviate poverty, oppression, and discrimination.

Graduates of the program are expected to be able to enhance the problem-solving, coping, and developmental capacities of individuals, especially those from at-risk populations. They also are expected to contribute to the effective and humane operation of the systems within the environment that provide individuals with resources, services, and opportunities; to link individuals in need with the appropriate systems; and to contribute to the development and improvement of social policies that have an impact on people and their social environments, especially by empowering at-risk groups and by promoting social and economic justice.

The BSW program is integrated with and builds upon a liberal arts base that includes knowledge in language arts, the humanities, and the social, behavioral, and natural sciences. The curriculum includes

content in social work values, diversity and at-risk populations, social and economic justice, human behavior and the social environment, research, social welfare policy and services, and social work intervention.

## Program Objectives

Students graduating from the BSW program are expected to demonstrate the following characteristics:

1. A professional identity that incorporates the values and ethics of the social work profession and the professional development of self.
2. The ability to work with diverse populations with an understanding of, and respect for, the positive value of diversity, including ethnicity, gender, sexual orientation, age, ability, and religion, and to use communication skills differentially with diverse groups.
3. An understanding of the forms and mechanisms of oppression and discrimination.
4. The ability to apply strategies and skills that advance social and economic justice and to address the oppression of at-risk populations.
5. An understanding of the biological, psychological, social, and cultural contexts of changing client systems, including individuals, families, groups, organizations, communities, and the broader society, and their effects on development and behavior.
6. Beginning level competencies in research and evaluation, including the ability to evaluate research studies and apply their findings to practice, and, under supervision, evaluate their own practice interventions and those of other relevant systems.
7. An understanding of how social policy develops and differentially affects various client systems, workers, and agencies.
8. An understanding of the role the social work profession has played in promoting social change, historically and currently.
9. The attainment of knowledge and skills that demonstrate the ability to practice effectively with individuals, families, groups, organizations, and communities, in a manner that empowers client systems and uses their strengths in order to maximize their health and well-being.
10. An ability to apply critical thinking skills within the context of professional social work roles and practice.
11. An awareness of their responsibility to continue their professional growth and development, including the use of supervision appropriate to generalist practice.

## History

The School of Social Work was established as a graduate program in 1949 and began classes in the fall of 1950 with twenty-four students enrolled in the MSSW program. Undergraduate courses in social work were first offered in 1958. These were incorporated into a full Bachelor of Social Work (BSW) program in the fall of 1974.

The first BSW degree was awarded in December, 1977. Since that time, the program has been strengthened by curriculum modifications reflecting changes in the profession and in society that have implications for beginning social work practice. Since the program was established, more than eleven hundred students have received BSW degrees.

The School of Social Work also offers programs leading to the Master of Science in Social Work and the Doctor of Philosophy. These are described in the *Graduate Catalog* (<http://registrar.utexas.edu/catalogs/grad11-13>).

## Facilities

The School of Social Work Building (1925 San Jacinto Boulevard) provides space for social work classes, including classrooms equipped for distance learning and an instructional technology classroom; offices for the faculty and staff; an advising center and student services area; and a student lounge. The building also houses the school's Learning Resource Center (LRC), which has an extensive collection of social work related books, journals, and other publications partially funded by the Josleen Lockhart Memorial Book Fund. The LRC includes a large computer laboratory for student use and provides space, equipment, and technical assistance for studying, meetings of small groups of students, viewing audiovisual materials, videotaping, and completing other skills-based learning assignments. The School of Social Work Building also houses the Center for Social Work Research, the DiNitto Center for Career Services, Con Mi Madre, and the Center for Students in Recovery.

## Financial Assistance Available through the School

Although many University scholarships are awarded through the Office of Student Financial Services, a limited number are awarded by the School of Social Work to undergraduate social work students. Awards are made for reasons ranging from academic promise to financial need. All social work majors who meet the eligibility requirements for the scholarships listed below are encouraged to apply. Additional information is available from the Academic Affairs Office.

The **Francis Crockett Memorial Scholarship** was established in memory of Francis Crockett. The scholarships provide support for undergraduate students in the School of Social Work who are planning a career in the mental health field. Preference will be given to applicants with demonstrated financial need, academic merit, and demonstrated involvement in their communities.

The **Vincent J. DiNitto Endowed Scholarship** was endowed in 2011 by Diana M. DiNitto, Ph.D., in memory of her father, Vincent J. DiNitto. Funds are distributed from the endowment and shall be used to award scholarship to social work students with financial need, with additional consideration given to academic achievement and professional potential. Dr. DiNitto is the Cullen Trust Centennial Professor in Alcohol Studies and Education and a University Distinguished Teaching Professor at the School of Social Work.

The **Bonny Gardner Social Justice Award** was established in 2006 through the generosity of Bonny Gardner, Ph.D. The award is given to a student who has shown an exemplary commitment to social justice through dissemination of knowledge, activism/advocacy, or leadership through class projects, field activities, and/or work within the community. Dr. Gardner received her doctorate and undergraduate degree from UT Austin.

The **George K. Herbert Endowed Scholarship** was created in 1989 through gifts from colleagues, faculty members, and alumni, the Wolens Foundation, the Social Work Advisory Council, and other friends in recognition of Dr. Herbert's dedication to high standards of professional service and contributions to social work education. Dr. Herbert served on the faculty and as dean of the School of Social

Work. Students are nominated for the award on the basis of academic excellence and potential contribution to professional social work. The endowment provides scholarships to undergraduate or graduate students in the School of Social Work, selected at the discretion of the dean, based on merit or need, on the recommendation of the School of Social Work Scholarship Committee.

The **Ami Lunsford Memorial Scholarship in Victim Services** was initiated by the Social Work Student Council in memory of Ami Lunsford, a May 1996 graduate of the School of Social Work. The scholarship was endowed in 1997 through gifts from family and friends. It is awarded on the basis of academic achievement and professional potential to social work students with a special interest in victim services.

The **Victor and Myra Ravel Scholarship in Children's Rights** was endowed in 1989 by Mr. and Mrs. Victor Ravel of Austin and the University Regents' Endowed Student Fellowship and Scholarship Program. The endowment is administered through the Austin Community Foundation; the income is used for scholarships to social work students interested in children's rights or child advocacy. Students are nominated on the basis of academic excellence and potential contribution to professional social work in the area of child advocacy.

The **Sylvia Shapiro Scholarship** was established in 1985 by Sidney S. Smith of Austin, in memory of his cousin, Sylvia Shapiro. Students are nominated on the basis of academic excellence, need, and potential contribution to professional social work with emphasis on work with the frail elderly.

The **King S. Stephens II Memorial Endowed Scholarship** was established in 1995 through the generosity of faculty members, family members, and friends in loving memory of this respected faculty member, whose fierce intellect and commitment to social justice challenged our ideas and inspired our sense of responsibility. Students are nominated on the basis of academic excellence and commitment to social justice.

The **August N. "Gus" Swain Endowed Scholarship** was established in 1993 in honor of Gus Swain, the first African American student to receive an MSSW degree from the School of Social Work. Students are selected on the basis of academic excellence, financial need, and potential contribution to the social work profession.

The **Melanie Walter-Mahoney Endowed Scholarship in Social Work Established by the Charles and Betti Saunders Foundation** was endowed in 2003 by the Charles and Betti Saunders Foundation to provide scholarship support for social work students. Mr. and Mrs. Saunders are both graduates of UT Austin. Their daughter, Melanie Walter-Mahoney, received her MSSW from the School of Social Work and a bachelor's degree in sociology from UT Austin.

The **Louis A. Zurcher Memorial Scholarship** was established by gifts in memory of Dr. Louis A. Zurcher, collected since his death in 1987. The scholarship is awarded to provide support to social work students.

## Other Scholarships

Additional scholarships funded by contributions to the School of Social Work are awarded to undergraduate social work majors each year. Students are nominated on the basis of academic excellence, financial need, and potential contribution to professional social work.



## Student Services

### Academic Advising

The Office of Academic Affairs in the School of Social Work seeks to assist the student in exploring social work as a career choice, in planning an academic program suited to the student's interests and talents, in seeking help with academic or personal problems, and in postgraduation planning, whether for employment or for further study. The Office of Academic Affairs also provides administrative support and student services, including maintenance of academic records, provision of official degree audits, and graduation certification for social work majors. Faculty and staff members are also available to assist students with questions about scholarship programs, degree requirements, rules and regulations, and other available campus services. Students who declare an interest in completing the social work program are required to meet with a social work adviser at least once each semester for academic advising. To arrange an appointment with an adviser, students should contact the Office of Academic Affairs.

During the student's first and second academic years, the student and the adviser discuss the student's career choice, the selection of a major, degree requirements, and requirements for admission to the major and to upper-division courses in social work; during the third year, the work required for the major and the student's preparation for entry into the field practicum; and during the fourth year, the field practicum and the student's postgraduation plans.

### Career Choice Information

Students interested in social work as a career are encouraged to discuss this interest at any time with a social work adviser. Advisers are available in the school's Office of Academic Affairs to help students explore social work practice and settings and the development of interest in social work through academic and volunteer experiences. Students may also seek the assistance of the DiNitto Center for Career Services, described in Career Services.

Members of the social work faculty are also available to assist the student in choosing a career, as are the staff and resources of the University's Sanger Learning Center, the Volunteer and Service Learning Center, and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies. Since the social work program requires admission to the major and completion of 125 semester hours, students are encouraged to discuss their interest in social work as a career early in their studies.

### Career Services

Career development services are provided to students preparing to enter the professional job market. Students should inquire in the DiNitto Center for Career Services, School of Social Work Building 2.214. The office maintains a listserv of employment opportunities and provides information about social work careers, graduate programs, online resources, and other opportunities for professional development, volunteer placement, and social work licensure. Workshops and other programs are offered on the fields of social work practice, résumé preparation, and job search and interview skills.

Professional social workers may seek employment in a number of areas. The Texas Department of Aging and Disability Services has established quality control standards that mandate the hiring of holders of BSW degrees in designated positions. The Texas Department of Family and Protective Services hires social workers for its child

protective services programs, and the Texas Health and Human Services Commission hires BSW graduates for its client support services programs. Large nursing home facilities are also required to have a social work staff. Substance abuse treatment programs, psychiatric hospitals, health care programs, school social work and dropout prevention programs, criminal justice programs, and programs for the elderly also employ social workers. More than a third of the program's graduates go on to graduate schools throughout the country.

As a complement to the assistance available from the school, the University's Sanger Learning Center in Jester Center and the Center for Strategic Advising and Career Counseling in the School of Undergraduate Studies provide comprehensive career services to all students. The centers offer professional assistance to students in choosing or changing their majors or careers, seeking an internship, and planning for the job search or for graduate study.

The University makes no promise to secure employment for each graduate.

## Social Work Council

The Social Work Council is an organization open to all students pursuing a social work degree or interested in the social work profession. The purposes of the council are to help students acquire a better understanding of the profession of social work, to provide a mechanism for student input on issues related to the social work curriculum and the school, and to organize and support social work related programs and projects that will benefit students, the school, the University, and the community.

Council activities are often conducted in collaboration with the Office of Academic Affairs. They include orientations to the BSW and MSSW programs, a career night, forums with guest speakers from community agencies and the University, community service projects, special interest groups that meet to discuss social work related topics, and social gatherings. Members of the council represent student concerns as voting members of the school's curriculum committees, the Senate of College Councils, and the Student Government.

## Professional Liability Insurance

Students must purchase professional liability insurance while they are enrolled in the field practicum. The cost is about fifteen dollars a semester. Payment is made to the Field Office of the School of Social Work. A criminal background check may be required as well.

## Admission and Registration

### Admission

#### Admission to the University

Admission and readmission of undergraduate students to the University is the responsibility of the director of admissions. Information about admission to the University is given in *General Information*.

#### Admission Policies of the School

The School of Social Work maintains two classifications of undergraduate students: pre-social work majors and social work majors. Pre-social work majors are usually freshmen and sophomores. After completing the requirements below, a student may apply for

admission to the professional curriculum as a social work major. Students who are admitted into the major complete at least three semesters of social work coursework and any other remaining degree requirements. Students who fulfill all degree requirements receive a Bachelor of Social Work degree.

The professional practice of social work requires people who are above average in academic ability and performance, sufficiently emotionally mature to assume a helping role with people under stress, and committed to the ethical standards and performance demands of social work practice. Students are encouraged to use the advising services in the School of Social Work early in their college careers in anticipation of meeting requirements for admission to the major. A student who is interested in seeking a social work degree must discuss his or her intentions with a social work adviser before applying for admission to the program.

## Admission to the School as a Pre-Social Work Major

A student may transfer from another division of the University to the School of Social Work in accordance with the regulations given in *General Information* (<http://registrar.utexas.edu/catalogs>).

A University student who wants to transfer as a pre-social work major must meet the following requirements:

1. Completion of at least twelve semester hours of coursework in residence at the University. Credit earned by exam, correspondence, and extension may not be counted toward this requirement.
2. A cumulative in-residence grade point average of at least 2.00.
3. If social work coursework has been completed prior to the application, a grade point of at least 2.50 in those courses is required, and all social work courses must have been completed with a grade of at least C.

Only currently enrolled students may apply. Forms to apply for internal transfer are available through the School of Social Work Office of Academic Affairs.

Admission to the School of Social Work is offered on a space-available basis to the students who are best qualified.

Students with over 90 semester hours of coursework or a completed degree are encouraged to consider other options, such as completing a degree in their current college/school or alternate institution with the option of pursuing a MSSW degree at a later date.

## Admission to the Major in Social Work

No student may enter the professional curriculum (the required upper-division social work courses) unless he or she has been admitted to the University as described in *General Information* and has been admitted to the major in social work by the assistant dean for undergraduate programs, following recommendation by the BSW Program Committee, according to the procedures below. All students are considered according to the policies given in the editions of *General Information* and the undergraduate catalog that are in effect at the time of the application.

The School of Social Work considers students for admission to the major twice a year, during the fall and spring semesters. A student who enters the University as a freshman in a fall semester will usually apply for admission to the professional curriculum in the spring semester of

the sophomore year or the fall semester of the junior year. Admission applications are distributed during mandatory information sessions held by the Office of Academic Affairs. The application allows the student to outline his or her background and motivation to enter the social work profession as well as any special experiences that enhance his or her application.

The School of Social Work limits admission to the major to the number of students to whom a professional education of high quality can be provided. Because of enrollment restrictions dictated by the availability of faculty members and facilities, some applicants may be denied admission even though they meet the following minimum requirements.

1. The applicant must have completed at least forty-five semester hours of coursework, including at least thirty hours chosen from the following requirements:
  - a. All requirements of the University's core curriculum (p. 21)
  - b. Sociology 302
  - c. Psychology 301
  - d. One three-semester-hour course in human biology: Biology 301L, 301M, 309D, 309F, or 311C
  - e. Second-semester-level proficiency, or the equivalent, in a single foreign language
  - f. A three-semester-hour course in economics
2. The applicant must have completed the following courses with a grade of at least C in each course: Social Work 310, 312, 313, 318, and either Human Development and Family Sciences 313 or Psychology 304. He or she must also have a grade point average of at least 2.50 in courses that are part of the social work major requirements
3. The applicant must have a University grade point average of at least 2.00
4. Application for admission must be made on forms available from the Office of Academic Affairs in the School of Social Work
5. The following must be submitted to the BSW Program by the application deadline:
  - A. The completed application for admission to the professional curriculum
  - B. A personal statement as explained on the application
  - C. At least two recommendation forms completed by appropriate individuals who can attest to the applicant's academic and professional readiness to enter the program
  - D. Documentation of successful completion of at least forty-five hours of supervised volunteer experience involving direct contact with clients in a human services organization
  - E. Official transcripts from all colleges attended, if the coursework has not been transferred to the student's University record
  - F. Score reports for any credit earned by examination, if the scores are not on the student's University record
6. The applicant may be asked to appear for a personal interview

The applicant is considered on the basis of academic performance and his or her commitment to and suitability for generalist social work practice. The committee also assesses the applicant's emotional and professional readiness to work with clients on the basis of such factors as his or her work in courses already taken, previous meetings

with social work advisers, personal statement, and the interview, if any, that is part of the application process. As a general guide, the committee also uses the *Student Standards for Social Work Education*, available at [www.utexas.edu/ssw/current/forms/](http://www.utexas.edu/ssw/current/forms/), which delineates expectations for social work students in four areas: basic abilities to acquire professional skills, mental and emotional abilities, professional performance skills, and scholastic performance. The *Standards* can be found in the appendix of the *BSW Handbook*, available at [www.utexas.edu/ssw/current/forms/](http://www.utexas.edu/ssw/current/forms/).

A student who is unable to attend in the semester for which he or she is admitted must reapply for admission in order to enroll at a later time. A student who has been admitted to and enrolls in the professional curriculum, withdraws, and then wishes to return must apply for readmission on the basis of the curriculum in effect at the time of the return. A student who has been out of the University for a semester or more must also submit an application for readmission to the University.

## Transfer Credit

As part of the application for admission to the University, students must submit transcripts from all other colleges and universities they have attended to the University's Office of Admissions. Students seeking readmission must submit transcripts from all schools they have attended since leaving the University. The Office of Admissions evaluates all transcripts and grants the student transfer credit when possible for coursework completed at the other schools.

Although the University's Office of Admissions may grant the student a certain number of semester hours of transfer credit for work completed in another social work program, the assistant dean for undergraduate programs in the School of Social Work determines whether this coursework may be counted toward fulfillment of the Bachelor of Social Work degree requirements. Students who wish to use transfer credit to meet degree requirements should submit a course syllabus, assignments, and the titles and names of authors of textbooks to the assistant dean for undergraduate programs for evaluation.

Students may also seek transfer credit for coursework they complete at another institution after enrolling at the University. In this case also the student should submit a transcript from the other institution to the University's Office of Admissions and a syllabus, course assignments, and information about textbooks to the School of Social Work's assistant dean for undergraduate programs.

## Registration

*General Information* gives information about registration, adding and dropping courses, transfer from one division of the University to another, and auditing a course. The *Course Schedule*, published at [registrar.utexas.edu/schedules/before](http://registrar.utexas.edu/schedules/before) registration each semester and summer session, includes registration instructions, advising locations, and the times, places, and instructors of classes. The *Course Schedule* and *General Information* are published on the registrar's Web site, <http://registrar.utexas.edu/>.

# Academic Policies and Procedures

## Honors

### University Honors

The designation University Honors, awarded at the end of each long-session semester, gives official recognition and commendation to students whose grades for the semester indicate distinguished academic accomplishment. Both the quality and the quantity of work done are considered. Criteria for University Honors are given in *General Information*.

### Graduation with University Honors

Students who, upon graduation, have demonstrated outstanding academic achievement are eligible to graduate with University Honors. Criteria for graduation with University Honors are given in *General Information*.

### School Honors Program

The Social Work Honors Program is available to outstanding students who have distinguished themselves by superior performance during their time at the University.

Majors who plan to seek special honors in social work should apply to the Honors Program Subcommittee of the BSW Program Committee for admission to the honors program at least one full year before they expect to graduate. A University grade point average of at least 3.50 is required for admission, as is a grade point average of at least 3.50 in all of the coursework required for the major that the student has completed. The requirements for graduation with special honors, which are in addition to the requirements for the major, are (1) a six-hour, two-semester honors tutorial course with a grade of at least B- in each half; (2) oral presentation of the honors thesis in a research colloquium open to the School of Social Work community and the public; (3) a University grade point average of at least 3.50 and a grade point average of at least 3.50 in the courses required for the major and for honors; and (4) completion in residence at the University of at least sixty hours of coursework counted toward the degree.

## Review and Grievance Procedures

The School of Social Work document *Student Standards for Social Work Education* delineates standards for professional education that apply to students enrolled in the School of Social Work. Because of the nature of professional social work practice, the School of Social Work has different expectations of students than do nonprofessional programs. All social work students are expected to abide by the *Standards* and by the National Association of Social Workers (NASW) Code of Ethics. When a student's performance does not meet expectations according to these established guidelines, a review may be called to bring the problem to the student's attention and to develop a plan to address the problem. Usually, the issue is resolved and the student is continued in the program with additional support provided to the student and/or conditions established for the student's continuance in the program. In some instances, depending on the nature of the problem, the student may be referred to the University's Office of the Dean of Students, counseled to change majors, or dismissed from the program.

Students enrolled in the social work program have the right to appeal decisions made by the social work program, including scholastic dismissal. Students are assured freedom from reprisals for filing appeals. Students who wish to appeal a decision made during a school review process should consult the *Standards* for information on grievance procedures, located in the BSW Handbook at [www.utexas.edu/ssw/current/forms/](http://www.utexas.edu/ssw/current/forms/).

## Graduation

### Special Requirements of the School

All students must fulfill the General Requirements (p. 18) for graduation. Students in the School of Social Work must also fulfill the following requirements.

1. All University students must have a grade point average of at least 2.00 to graduate. In the School of Social Work, students must also have a grade point average of at least 2.50 in required social work courses.
2. To receive an undergraduate degree from the University, every student must fulfill the following requirements on coursework taken in residence:
  - A. All University students must complete in residence at least sixty semester hours of coursework counted toward the degree. For the Bachelor of Social Work degree, these sixty hours must include at least twenty-four hours in the major and must include the required field practicum courses.
  - B. The University requires that at least six semester hours of advanced coursework in the major be completed in residence. The School of Social Work further requires that twenty-four of the forty-six hours of upper-division coursework for the Bachelor of Social Work be completed in residence.
3. An Air Force, Army, or Naval Reserve Officer Training Corps student who elects the basic and/or advanced program in air force science, military science, or naval science will not be approved for graduation until the government contract is completed, unless the student is released from the ROTC.

### Applying for Graduation

The Office of Academic Affairs provides each student with a computer-generated degree audit during each long-session semester. The degree audit notifies the student of the courses he or she must take and the requirements he or she must fulfill to receive the degree. The degree audit normally provides an accurate statement of requirements, but the student is responsible for knowing the exact requirements for the degree as stated in a catalog under which he or she is eligible to graduate and for registering so as to fulfill those requirements. The student should seek an official ruling in the Office of Academic Affairs before registering if in doubt about any requirement.

In the semester or summer session in which the degree is to be conferred, the candidate must be registered at the University and must apply for the degree in the Office of Academic Affairs. This should be done at the time of registration for the last semester, if possible, but in no event later than the deadline given in the official academic calendar.

No degree will be conferred unless the graduation application form has been filed on time.

### Advanced Standing in Master's Degree Programs

A number of graduate schools of social work grant advanced standing to students who have completed all the requirements of an accredited undergraduate social work program. Many programs allow up to one year of credit toward the master's degree in social work. Information about programs offering advanced standing is available in the Office of Academic Affairs.

## Degrees and Programs

### Applicability of Certain Courses

No more than thirty-six semester hours in any one field of study other than social work may be counted toward the Bachelor of Social Work degree. No more than sixty semester hours of social work may be counted toward the degree.

### Physical Activity Courses

Physical activity courses (PED) are offered by the Department of Kinesiology and Health Education. Six semester hours of this coursework may be counted toward the Bachelor of Social Work degree. All physical activity courses are counted among courses for which the student is enrolled, and the grades are included in the grade point average.

### ROTC Courses

No more than six semester hours of credit for air force science, military science, or naval science courses may be counted toward the Bachelor of Social Work. Such credit may be used only as lower-division electives in degree programs that have room for such electives and only by students who have completed the third and fourth years of the ROTC program.

### Correspondence and Extension Courses

Credit that a University student in residence earns simultaneously by correspondence or extension from the University or elsewhere or in residence at another school will not be counted toward a degree in the School of Social Work unless specifically approved in advance by the dean. No more than 30 percent of the semester hours required for the Bachelor of Social Work may be taken by correspondence. More information is available from the assistant dean for undergraduate programs.

### Courses Taken on the Pass/Fail Basis

Undergraduate students who have received at least thirty semester hours of college credit may take no more than five one-semester courses in elective subjects outside their major area on the pass/fail basis. Students must state their intention to register on this basis by the deadline given in the official academic calendar; they may not change the basis of registration in a course more than once; and they may not take more than two courses a semester on this basis.



## Other Courses

Music 101G may not be counted toward any degree in the School of Social Work. Other introductory courses, such as Music 201J, 201M, and 201N, may be counted toward degrees in the school.

No more than six semester hours of Bible courses may be counted toward the Bachelor of Social Work degree.

## The Minor

Plans for a minor in psychology, sociology, or another approved area may be developed with advising assistance from the Office of Academic Affairs. A minor requires completion of at least twelve semester hours, six of which must be upper-division.

## Bachelor of Social Work

The requirements for the Bachelor of Social Work degree are designed to give the student an opportunity for integrated, nonrepetitive learning. A total of 125 semester hours is required. These may include credit by examination and a maximum of five one-semester elective courses taken on the pass/fail basis. All students must complete the requirements for the major and must complete at least sixty semester hours in residence at the University. These sixty hours must include at least twenty-four semester hours in social work. A completed degree program must include at least forty-six semester hours of upper-division coursework, of which twenty-four semester hours must have been taken in residence. No more than sixty semester hours in social work may be counted toward the degree.

Each student must complete a sequence of prescribed work; major requirements, which include the field practicum; and special requirements, which include electives.

## Prescribed Work

The prescribed work provides the liberal arts base for the social work curriculum. Interdepartmental courses and credit by examination may be used to meet these requirements. Unless otherwise indicated, a course taken to meet the requirements of one area may not also be used to fulfill the requirements of another area; however, a single course may be used, unless otherwise indicated, to fulfill both an area requirement and a major requirement. No course used to fulfill area or major requirements, other than the field practicum, may be taken on the pass/fail basis.

## Core Curriculum

All students must complete the University's Core Curriculum (p. 22). A single course may not be counted toward more than one core area, but in some cases a course that is required for the Bachelor of Social Work may also be counted toward the core curriculum; these courses are identified below.

## Skills and Experience Flags

In the process of fulfilling the core curriculum and other degree requirements, all students pursuing the Bachelor of Social Work must complete courses that carry flags in the following areas:

1. Writing: Three courses beyond Rhetoric and Writing 306 or the equivalent that carry a writing flag; one of these courses must be upper-division. Social Work 323K and 327 count toward this

requirement; students must complete the third writing course outside the School of Social Work. Courses used to fulfill the writing requirement may be used to fulfill other requirements.

2. Cultural diversity in the United States: One flagged course. Social Work 310 and 325 carry the cultural diversity flag.
3. Ethics and leadership: One flagged course. Social Work 332 and 333 carry the ethics and leadership flag.
4. Quantitative reasoning: One flagged course. Social Work 318 carries the quantitative reasoning flag.
5. Global cultures: One flagged course chosen from approved list.

## Foreign Language

In addition to the core curriculum requirements above, undergraduates must earn credit for the second college-level course, or the equivalent, in a foreign language. American Sign Language may be used to fulfill this requirement.

## Major Requirements

The Bachelor of Social Work program offers basic courses designed to provide students with concentrated and in-depth educational experience combining social work knowledge and practice skills. No course used to fulfill major requirements, except Social Work 640 and 641, may be taken on the pass/fail basis. Students are advised to complete the core curriculum, the skills and experiences flags, the foreign language requirement, and all lower-division major requirements before taking upper-division courses. In developing their degree plans, students must also pay careful attention to the sequencing of social work courses to ensure that prerequisite requirements are met.

Academic credit cannot be granted for life experience or previous work experience, and such experience cannot be substituted for any of the courses in the professional foundation areas or the field practicum. Students who believe they have the qualifications to receive credit by examination for a social work course other than the practice sequence coursework (Social Work 312, 332, 333, and 334) and the field practicum may submit a written request to the assistant dean for undergraduate programs. The assistant dean will review the request and determine whether or not the student should be permitted to take the examination.

1. The following courses are required:
  - A. Social welfare policy: Social Work 310, 323K.
  - B. Research: Social Work 313, 318.
  - C. Human behavior: Social Work 325, 327.
  - D. Practice: Social Work 312, 332, 333, 334.
  - E. Field practicum: Social Work 640, 641, 444.
2. Students must complete a three-semester-hour introductory course in psychology. Psychology 301 fulfills this requirement and may also be counted toward the social and behavioral science requirement of the core curriculum.
3. Students must complete a three-semester-hour introductory course in sociology. Sociology 302 fulfills this requirement and may also be counted toward the social and behavioral science requirement of the core curriculum.
4. Students must complete either Human Development and Family Sciences 313 or Psychology 304.

5. Students must complete a three-semester-hour course in human/environmental biology: Biology 301L, 301M, 309D, 309F, 311C, or the equivalent. Biology 301L and 301M or Biology 311C and 301M may be used together to complete the science and technology part I requirement. If biology coursework is not used for science and technology part I, any of these courses may be used to fulfill the science and technology part II requirement.
6. Students must complete three semester hours in economics. Certain economics courses may also be used to fulfill the social and behavioral sciences requirement of the core curriculum.
7. Students must complete at least nine semester hours of upper-division coursework in the social and behavioral sciences (applied learning and development, anthropology, economics, educational psychology, government, history, kinesiology, psychology, sociology, Social Work 360K topics) in addition to other major requirements. Six of these nine hours may be upper-division social work electives.

## Field Sequence Requirements

The social work program requires that students complete 45 clock hours of supervised volunteer experience related to social work to be admitted to the major, to upper-division courses in social work, and to the field practicum. These volunteer hours may be used to meet course requirements in Social Work 310 and 312. Students must also complete 480 clock hours of fieldwork as part of the course requirements in Social Work 640 and 641. Students have the opportunity in the field practicum to develop the professional skills needed for entry-level social work positions as generalist practitioners. Adequate laboratory time through the field practicum is built into this professional program to provide students with an opportunity to test their developing skills in a real-life environment. At the same time, faculty members evaluate the student's professional development within the context of the educational objectives established for the experience. The goals are for the student to learn real-life practice, to develop skills, to relate concepts to skill development, to remain motivated to continue to learn, and to evaluate personal performance.

To enroll in the field practicum, students must meet the following requirements: (1) admission to the major in social work; (2) a University grade point average of at least 2.00; (3) completion of the core curriculum, the skills and experiences flags, and the foreign language requirement; and (4) both a grade point average of at least 2.50 for the following group of courses and a grade of at least C in each course in the group: Social Work 310, 312, 313, 318, 323K, 325, 327, 332, 333, and 334.

Following the student's admission to the field practicum, his or her work is reviewed periodically by the student, the field faculty, and the agency supervisor. Should the student have trouble meeting the professional or academic requirements of the program, the review process will bring the difficulty to the student's attention and assist the student in seeking appropriate resolution. The student may make use of counseling and advising services at any time. If difficulties cannot be resolved, the field director may conduct an administrative review, which may result in a decision to terminate the student's field placement. The student is notified of this decision in writing.

All social work students enrolling in the field practicum are required to show evidence of professional liability insurance coverage paid for the duration of the course. The effective date of the policy must be on or before the first regular class period of the field practicum course for

which the student is enrolling. Failure to provide evidence of insurance may result in the student being dropped from the field practicum.

## Special Requirements

### Elective Requirements and Limitations

In addition to the area and major requirements given above, the student must take elective coursework to complete the 125 semester hours required for the Bachelor of Social Work. No more than five one-semester courses taken on the pass/fail basis, thirty-six hours in any one field of study other than social work, and fifty-four hours in social work may be counted toward the 125-hour requirement.

### Minimum Scholastic Requirements

1. The student must fulfill the University-wide graduation (p. 18) requirements and the requirements of the School of Social Work given earlier in this section.
2. To apply for admission to the social work major, a student must have earned a grade of at least C in each of the following courses: Social Work 310, 312, 313, 318, and Psychology 304 or Human Development and Family Sciences 313. The student must also have a University grade point average of at least 2.00 and a grade point average of at least 2.50 in all the courses he or she has completed that are part of the social work major requirements. Additional requirements are given in the section Admission to the Major in Social Work (p. 619).
3. Following the student's admission to the major, the student's coursework is reviewed periodically by the student and the academic adviser. Students must maintain a University grade point average of at least 2.00; they must also earn a grade of at least C in each course listed as a social work major requirement and must maintain a grade point average of at least 2.50 in these courses. If the student has trouble meeting the professional or academic requirements of the major, the review process delineated in *Student Standards for Social Work Education*, available at [www.utexas.edu/ssw/current/forms/](http://www.utexas.edu/ssw/current/forms/), will bring the difficulty to the student's attention and assist the student in making appropriate resolution. The student may make use of counseling and advising services at any time.
4. If the student's grade point average in social work courses falls below 2.50, the student is placed on academic probation in social work. If the grade point average remains below 2.50 for two consecutive semesters, including the summer session, the student is subject to academic dismissal from the School of Social Work.
5. All students who seek to reenter the School of Social Work after having been placed on enforced withdrawal or academic dismissal must have the approval of the assistant dean for undergraduate programs.
6. Any student who has a grade of C or higher in a course may not repeat the course and use the second grade to improve his or her grade point average without special permission of the assistant dean for undergraduate programs. If a student repeats a course, all grades received for the course are included in the grade point average.

## Order and Choice of Work

A pre-social work major may fulfill the requirements for application to the major in four or five long-session semesters, depending on the number of hours completed each semester. After admission to the

major, students complete a three-semester professional sequence and additional requirements needed for the BSW degree.

#### Suggested Schedule for Pre–Social Work Majors

### First Year

Thirty semester hours:

- Rhetoric and Writing 306, *Rhetoric and Writing*
- Social Work 310, *Introduction to Social Work and Social Welfare*
- Psychology 301, *Introduction to Psychology*
- Biology 301M, *Ecology, Evolution, and Society*
- Undergraduate Studies 302, *First-Year Signature Course* or Undergraduate Studies 303, *First-Year Signature Course*
- A three-hour course to be counted toward the core curriculum mathematics requirement
- Sociology 302, *Introduction to the Study of Society*
- A three-hour course to be counted toward the American history requirement of the core curriculum
- A three-hour course to be counted toward the visual and performing arts requirement of the core curriculum
- Government 310L, *American Government*

### Second Year

Thirty-one semester hours:

- English 316K, *Masterworks of Literature*
- Government 312L, *Issues and Policies in American Government*
- Social Work 318, *Social Work Statistics*
- Social Work 312, *Generalist Social Work Practice: Knowledge, Values, and Skills*
- Social Work 313, *Social Work Research Methods*
- Psychology 304, *Introduction to Child Psychology*, or Human Development and Family Sciences 313, *Child Development*
- A three-hour course to be counted toward the American history requirement of the core curriculum
- Foreign language 506 and 507, or an equivalent sequence; or American Sign Language 506 and 507

### Third Year

Thirty-six semester hours:

- Six hours of coursework that, with Biology 301M, fulfill both parts of the core curriculum science and technology requirement
- A three-hour non–social work course that carries a writing flag
- A three-hour economics course
- Six hours of upper-division social and behavioral science coursework
- Six hours of elective coursework
- A three-hour global cultures flag course
- Social Work 325, *Foundations of Social Justice*
- Social Work 327, *Human Behavior and Social Environment*
- Social Work 334, *Social Work Practice in Organizations and Communities*

### Fourth Year

Thirty-one semester hours:

- Social Work 323K, *Social Welfare Programs, Policies, and Issues*
- Social Work 332, *Social Work Practice with Individuals and Families*
- Social Work 333, *Social Work Practice with Groups*
- Social Work 640, *Social Work Practicum I*
- Social Work 641, *Social Work Practicum II*
- Social Work 444, *Integrative Seminar*
- Three hours of upper-division coursework in social and behavioral science
- A three-hour upper-division elective if needed to provide the required forty-six hours of upper-division credit

The student must also complete all other remaining required coursework before the field practicum, including electives needed to provide the total of 125 semester hours required for the degree. No other courses may be taken concurrently with the field practicum courses.

## Courses

The faculty has approval to offer the following courses in the academic years 2012–2013 and 2013–2014; however, not all courses are taught each semester or summer session. Students should consult the *Course Schedule* to determine which courses and topics will be offered during a particular semester or summer session. The *Course Schedule* may also reflect changes made to the course inventory after the publication of this catalog.

A full explanation of course numbers is given in *General Information* (<http://catalog.utexas.edu/general-information>). In brief, the first digit of a course number indicates the semester hour value of the course. The second and third digits indicate the rank of the course: if they are 01 through 19, the course is of lower-division rank; if 20 through 79, of upper-division rank; if 80 through 99, of graduate rank.

The information in parentheses after a course number is the Texas Common Course Numbering (TCCN) designation. Only TCCN designations that are exact semester-hour equivalents of University courses are listed here. Additional TCCN information is given in Appendix A (p. 627).

## Social Work: S W

### Lower-Division Courses

#### S W 301C. Freshman Seminar.

Restricted to first-semester freshmen. Small-group seminar involving reading, discussion, writing, and oral reports. Introduction to University resources, including libraries, computer and research facilities, and museums. Several sections are offered each semester, with various topics and instructors. Two lecture hours and one discussion hour a week for one semester.

#### S W 301D. Connecting Research Experience.

Restricted to freshmen and sophomores. Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines Program, may be

repeated for credit. Prerequisite: Admission to the Connexus Bridging Disciplines Program.

### **S W 102D, 202D, 302D. Connecting Internship Experience.**

Supervised internship experience related to interdisciplinary themes of a Bridging Disciplines Program. Internships may be on or off campus, be paid or unpaid, and may include work with nonprofit agencies, government offices, or private corporations. For 102D, three hours of fieldwork a week for one semester; for 202D, six hours of fieldwork a week for one semester; for 302D, ten hours of fieldwork a week for one semester. With consent of the Bridging Disciplines Programs research coordinator, may be repeated once for credit. Prerequisite: Admission to the Bridging Disciplines Programs.

### **S W 310 (TCCN: SOCW 2361). Introduction to Social Work and Social Welfare.**

Introduction to the profession of social work and its roles in the social welfare system, with emphasis on social problems, society's historical response, and contemporary proposed solutions. Three lecture hours a week for one semester, and forty-five clock hours of volunteer experience.

### **S W 311. Selected Topics in Social Welfare.**

Analysis of selected policy and program implications in the human services. Three lecture hours a week for one semester. May be repeated for credit when the topics vary.

### **S W 312. Generalist Social Work Practice: Knowledge, Values, and Skills.**

Introduction to generalist social work practice, with emphasis on the knowledge, values, and skills used in intervention. Three lecture hours a week for one semester, and forty-five clock hours of volunteer experience. Prerequisite: Social Work 310.

### **S W 313. Social Work Research Methods.**

Introduction to the logic, design, and use of research, with emphasis on research designs appropriate to social work. Three lecture hours a week for one semester. Prerequisite: Social Work 318.

### **S W 318. Social Work Statistics.**

Introduction to statistics commonly used in social work research, including the critical analysis of the findings and inferential processes of existing research studies. Three lecture hours a week for one semester. Prerequisite: Completion of the Area C mathematics requirement for the Bachelor of Social Work.

### **S W 118C, 218C, 318C. Forum Seminar Series.**

Restricted to freshmen and sophomores. Lectures and discussion on various contemporary issues. Emphasis on multidisciplinary perspectives and critical discourse. For 118C, two lecture hours a week for eight weeks; for 218C, two lecture hours a week for one semester; for 318C, three lecture hours a week for one semester, or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary.

## **Upper-Division Courses**

### **S W 320C. Connecting Research Experience.**

Supervised research associated with the Connexus Bridging Disciplines Program. The equivalent of three lecture hours a week for one semester. With consent of the Connexus Bridging Disciplines

Program, may be repeated for credit. Prerequisite: Upper-division standing and admission to the Connexus Bridging Disciplines Program.

### **S W 323K. Social Welfare Programs, Policies, and Issues.**

Study of structure and function of service delivery systems, policy analysis, and effects and influences of policy on practice and planning decisions. Three lecture hours a week for one semester. Prerequisite: Government 310L, 312L, History 315K, 315L, three semester hours of coursework in economics, and admission to the major in social work.

### **S W 325. Foundations of Social Justice.**

History and demographics of culturally diverse groups in the United States, including family and community diversity. Emphasis on principles of knowledge acquisition about cultural diversity and ethnic-sensitive social work practice. Three lecture hours a week for one semester. Social Work 325 and 360K (Topic: Cultural Diversity in a Changing Society) may not both be counted. Prerequisite: Admission to the major in social work.

### **S W 327. Human Behavior and Social Environment.**

Survey of selected theories of human behavior, including a systems/ecological perspective, ego psychology, and social learning theory, with emphasis on the life cycle from adolescence through adulthood. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Admission to the major in social work.

### **S W 128C, 228C, 328C. Advanced Connexus Forum Seminar Series.**

Discussion of contemporary issues related to the topics of a Bridging Disciplines Program, with an emphasis on multidisciplinary perspectives, research, and critical discourse. For 128C, two lecture hours a week for eight weeks; for 228C, two lecture hours a week for one semester; for 328C, three lecture hours or two lecture hours and one hour of supervised research a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing. Additional prerequisites may vary with the topic and are given in the Course Schedule.

### **S W 332. Social Work Practice with Individuals and Families.**

Theory and knowledge of effecting change in individuals and families, with emphasis on analytical and interactional processes and skills. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Social Work 325 and 327.

### **S W 333. Social Work Practice with Groups.**

Theory and knowledge of group dynamics and the development of effective group work skills, with an emphasis on analytical and interactional processes. Three lecture hours and one discussion hour a week for one semester. Prerequisite: Social Work 325 and 327.

### **S W 334. Social Work Practice in Organizations and Communities.**

Theory and knowledge of effecting change in organizations and communities, with an emphasis on analytical and interactional processes and skills. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Social Work 325 and 327.

### **S W 640. Social Work Practicum I.**

Field practicum providing supervised experience in which students apply knowledge and develop skills of social work practice.



Educational supervision by faculty and by social workers in community agencies. Sixteen laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the field sequence and concurrent enrollment in Social Work 641 and 444.

**S W 641. Social Work Practicum II.**

Knowledge and skill in social work, building on objectives emphasized in Social Work 640. Educational supervision by faculty and by social workers in community agencies. Sixteen laboratory hours a week for one semester. Offered on the pass/fail basis only. Prerequisite: Admission to the field sequence and concurrent enrollment in Social Work 640 and 444.

**S W 444. Integrative Seminar.**

Integration of theory and practice on the basis of field practicum experiences. Four lecture hours a week for one semester. Prerequisite: Completion of all requirements for the Bachelor of Social Work degree except Social Work 640 and 641, and concurrent enrollment in Social Work 640 and 641.

**S W 350. Special Topics in Generalist Social Work.**

Conference course. May be repeated for credit. Prerequisite: Upper-division standing.

**S W 360K, 460K. Current Welfare Issues.**

A tutorial and seminar course designed to enable each student to undertake intensive study of selected aspects of social welfare practice. Topics include child abuse and neglect, chemical dependency, African American family, gerontology, and social work and the law. Three or four lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic and is given in the Course Schedule.

**Topic 1: Computer Applications in Direct Services.**

**Topic 2: African American Family.** Social Work 360K (Topic 2) is same as African and African Diaspora Studies 374 (Topic 1: African American Family) and Women's and Gender Studies 340 (Topic 3: African American Family).

**S W 679H. Honors Tutorial Course.**

Individual conference course in social work research and writing. The equivalent of three lecture hours a week for two semesters. Prerequisite: Upper-division standing and admission to the Social Work Honors Program.

## Appendix A: Texas Common Course Numbering System

To help students transfer credit from one institution to another, Texas community colleges employ a statewide numbering system for their courses. The Texas Common Course Numbering system (TCCN) is a standard set of four-character abbreviations for academic disciplines and four-digit course numbers. The first digit of the number represents the academic level of the course (0 for subfreshman, 1 for freshman, and 2 for sophomore); the second represents the semester credit hour value of the course. Texas public universities, and some private ones, cross-reference their courses with TCCN.

Listed below are TCCN course designations and their University transfer credit evaluations. In the University's three-digit numbering system, the first digit indicates the semester credit hour value of the course. The suffixes *A* and *B* indicate the first and second parts of a course; credit for each part is half the value indicated by the first digit.

Notes are given below the table.

TCCN Course	UT Austin Evaluation
ACCT 2301	ACC 311
ACCT 2302	ACC 312
ACCT 2401	ACC 312 <sup>1</sup>
ACCT 2402	1
ANTH 2301	ANT 301
ANTH 2302	ANT 304
ANTH 2351	ANT 302
ANTH 2401	1
ARAB 1311	3
ARAB 1312	3
ARAB 1411	3
ARAB 1412	3
ARAB 1511	ARA 506
ARAB 1512	ARA 507
ARAB 2311	3
ARAB 2312	3
ARCH 1301	ARC 318K
ARCH 1302	ARC 318L
ARCH 1311	ARC 308 <sup>7</sup>
ARTS 1301	ARH 301
ARTS 1303	ARH 302
ARTS 1304	ARH 303
ARTS 1311	ART 304K
ARTS 1312	ART 304L
ARTS 1316	ART 303K
ARTS 1317	ART 315K
ARTS 2316	ART 311K
ARTS 2323	ART 316K
ARTS 2326	ART 313K
ARTS 2341	ART 314K
ARTS 2346	ART 310K
ARTS 2356	ART 317K

ASTR 1103	AST 103L
ASTR 1104	AST 1 LAB
ASTR 1303	AST 301
ASTR 1304	AST 309
ASTR 1403	AST 301+103L
ASTR 1404	AST 309+1 LAB
BCIS 1305	MIS 310
BCIS 1405	1
BIOL 1106	BIO 206LA <sup>2</sup>
BIOL 1107	BIO 206LB <sup>2</sup>
BIOL 1108	BIO 1 LAB <sup>2</sup>
BIOL 1109	BIO 1 LAB <sup>2</sup>
BIOL 1111	BIO 1 LAB <sup>2</sup>
BIOL 1113	BIO 1 LAB <sup>2</sup>
BIOL 1306	BIO 311C <sup>2</sup>
BIOL 1307	BIO 311D <sup>2</sup>
BIOL 1308	BIO 301L <sup>2</sup>
BIOL 1309	BIO 301M <sup>2</sup>
BIOL 1311	BIO 3 FRMN <sup>2</sup>
BIOL 1313	BIO 3 FRMN <sup>2</sup>
BIOL 1322	NTR 306
BIOL 1406	BIO 311C+BIO 206LA <sup>2</sup>
BIOL 1407	BIO 311D+BIO 206LB <sup>2</sup>
BIOL 1408	BIO 301L+1 LAB <sup>2</sup>
BIOL 1409	BIO 301M+1 LAB <sup>2</sup>
BIOL 1411	BIO 4 FLAB <sup>2</sup>
BIOL 1413	BIO 4 FLAB <sup>2</sup>
BIOL 2101	BIO 1 LAB <sup>2</sup>
BIOL 2102	BIO 1 LAB <sup>2</sup>
BIOL 2120	BIO 1 LAB <sup>2</sup> MIC 116L <sup>4</sup>
BIOL 2121	BIO 1 LAB <sup>2</sup> MIC 119K <sup>4</sup>
BIOL 2301	3,4
BIOL 2302	3,4
BIOL 2320	BIO 3 SOPH <sup>2</sup> MIC 316 <sup>1,4</sup>
BIOL 2321	BIO 3 SOPH <sup>2</sup> MIC 319 <sup>4</sup>
BIOL 2401	4
BIOL 2402	4
BIOL 2420	BIO 4 SLAB <sup>2</sup> MIC 316 <sup>1,4</sup> +116L <sup>4</sup>
BIOL 2421	BIO 4 SLAB <sup>2</sup> MIC 319 <sup>4</sup> +119K <sup>4</sup>
CHEM 1111	3

CHEM 1112	3	DANC 1341	T D 312F
CHEM 1311	CH 301	DANC 1342	T D 312F
CHEM 1312	CH 302	DANC 1345	T D 312C
CHEM 1411	CH 301+ <sup>3</sup>	DANC 1346	T D 312C
CHEM 1412	CH 302+ <sup>3</sup>	DANC 1351	T D 312P
CHEM 2123	CH 110K <sup>4</sup>	DANC 1352	T D 312P
CHEM 2125	CH 110L <sup>4</sup>	DANC 2141	3
CHEM 2223	1,4	DANC 2142	3
CHEM 2225	1,4	DANC 2145	3
CHEM 2323	4	DANC 2146	3
CHEM 2325	4	DANC 2151	T D 112P
CHEM 2423	+110K	DANC 2152	T D 112P
CHEM 2425	+110L	DANC 2241	3
CHIN 1311	3	DANC 2242	3
CHIN 1312	3	DANC 2245	3
CHIN 1411	3	DANC 2246	3
CHIN 1412	3	DANC 2251	T D 212P
CHIN 1511	CHI 506	DANC 2252	T D 212P
CHIN 1512	CHI 507	DANC 2341	T D 312G
CHIN 2311	3	DANC 2342	T D 312G
CHIN 2312	3	DANC 2345	T D 312D
COMM 1307	RTF 305	DANC 2346	T D 312D
COMM 1316	COM 316	DANC 2351	T D 312P
COMM 1335	RTF 316	DANC 2352	T D 312P
COMM 2302	J 301F	DRAM 1120	3
COMM 2316	CMS 316L	DRAM 1121	3
COMM 2366	RTF 314	DRAM 1220	3
CZEC 1311	3	DRAM 1221	3
CZEC 1312	3	DRAM 1310	T D 301
CZEC 1411	3	DRAM 1320	T D 314P
CZEC 1412	3	DRAM 1321	T D 314P
CZEC 1511	CZ 506	DRAM 1323	T D 314P
CZEC 1512	CZ 507	DRAM 1330	T D 314C
CZEC 2311	CZ 312K	DRAM 1351	T D 313C
CZEC 2312	CZ 312L	DRAM 1352	T D 313D
DANC 1141	3	DRAM 2120	3
DANC 1142	3	DRAM 2121	3
DANC 1145	3	DRAM 2220	3
DANC 1146	3	DRAM 2331	T D 314M
DANC 1151	T D 112P	DRAM 2336	T D 303C
DANC 1152	T D 112P	DRAM 2351	T D 313E
DANC 1241	3	DRAM 2361	T D 317C
DANC 1242	3	DRAM 2362	T D 317D
DANC 1245	3	DRAM 2366	RTF 314
DANC 1246	3	ECON 2301	ECO 304L
DANC 1251	T D 212P	ECON 2302	ECO 304K
DANC 1252	T D 212P	EDUC 1100	EDP 110 (Topic 1)
		EDUC 1200	EDP 210 (Topic 1)
		EDUC 1300	EDP 310 (Topic 1)
		ENGL 1301	RHE 306

ENGL 1302	RHE 309K
ENGL 2311	RHE 317 <sup>4</sup>
ENGL 2321	E 316K
ENGL 2322	E 316K
ENGL 2323	E 316K
ENGL 2326	E 316K
ENGL 2327	E 316K
ENGL 2328	E 316K
ENGL 2331	E 316K
ENGL 2332	E 316K
ENGL 2333	E 316K
ENGL 2351	E 314V (Topic 3)
ENGR 2301	E M 306
ENGR 2302	E M 311M
ENGR 2305	E E 302
ENGR 2332	E M 319
ENGR 2401	1
ENGR 2402	1
ENGR 2432	1
FREN 1311	3
FREN 1312	3
FREN 1411	3
FREN 1412	3
FREN 1511	FR 506
FREN 1512	FR 507
FREN 2311	FR 312K
FREN 2312	FR 312L
GEOG 1301	GRG 301C
GEOG 1303	GRG 305
GEOL 1303	3
GEOL 1304	3
GEOL 1345	GEO 307
GEOL 1347	GRG 301K
GEOL 1403	GEO 401
GEOL 1404	GEO 405
GEOL 1447	1
GERM 1311	3
GERM 1312	3
GERM 1411	3
GERM 1412	3
GERM 1511	GER 506
GERM 1512	GER 507
GERM 2311	GER 312K
GERM 2312	GER 312L
GOVT 2301	GOV 310L <sup>5</sup>
GOVT 2302	GOV 312L <sup>5</sup>
GOVT 2305	GOV 3 US <sup>5</sup>
GOVT 2306	GOV 3 TX <sup>5</sup>
GOVT 2311	MAS 312

GREE 1311	3
GREE 1312	3
GREE 1411	3
GREE 1412	3
GREE 1511	GK 506
GREE 1512	GK 507
GREE 2311	GK 311
HECO 1320	1
HECO 1322	NTR 306
HIST 1301	HIS 315K
HIST 1302	HIS 315L
HIST 2311	HIS 309K
HIST 2312	HIS 309L
HIST 2313	HIS 304K
HIST 2314	HIS 304L
HIST 2327	HIS 317L
HIST 2328	HIS 314K
HIST 2381	HIS 317L
HUMA 1305	MAS 310
HUMA 1315	F A 310
ITAL 1311	3
ITAL 1312	3
ITAL 1411	3
ITAL 1412	3
ITAL 1511	ITL 506
ITAL 1512	ITL 507
ITAL 2311	ITL 312K
ITAL 2312	ITL 312L
JAPN 1311	3
JAPN 1312	3
JAPN 1411	3
JAPN 1412	3
JAPN 1511	JPN 506
JAPN 1512	JPN 507
JAPN 2311	3
JAPN 2312	3
KINE 1151	PED 102G
KINE 1152	PED 102G
KINE 1153	(Topic 3 or 4) <sup>3</sup>
KINE 1206	KIN 213 (Topic 1)
KINE 1253	KIN 213 (Topic 3 or 4)
KINE 1306	(Topic 1) <sup>1</sup>
KINE 1308	1
KINE 1309	1
KINE 1321	1
KINE 1322	1
KINE 1331	KIN 314
KINE 2155	(Topic 2) <sup>3</sup>



KINE 2255	KIN 213 (Topic 2)
KINE 2355	(Topic 2) <sup>1</sup>
KINE 2356	KIN 312 (Topic 2)
KORE 1311	3
KORE 1312	3
KORE 1411	3
KORE 1412	3
KORE 1511	KOR 506
KORE 1512	KOR 507
KORE 2311	3
KORE 2312	3
LATI 1311	3
LATI 1312	3
LATI 1411	3
LATI 1412	3
LATI 1511	LAT 506
LATI 1512	LAT 507
LATI 2311	LAT 311
MATH 1314	M 301
MATH 1316	4
MATH 1324	M 303D
MATH 1325	3
MATH 1332	M 302
MATH 1342	M 316
MATH 1350	M 316K
MATH 1351	M 316L
MATH 1414	1
MATH 1425	M 403K
MATH 1442	1
MATH 2312	M 305G
MATH 2313	3 or 308N <sup>3</sup>
MATH 2314	M 308L <sup>3</sup> or 308S <sup>3</sup>
MATH 2315	M 308M <sup>3</sup>
MATH 2318	4
MATH 2320	3
MATH 2342	M 316
MATH 2412	1
MATH 2413	M 408K or M 408N
MATH 2414	M 408L or M 408S
MATH 2415	M 408M
MATH 2417	M 408C
MATH 2418	1,4
MATH 2419	M 408D
MATH 2420	M 427K
MATH 2442	1
MATH 2513	1 or 508N <sup>1</sup>

MUAP	Applied music performance courses transfer as generic semester hour credit in an appropriate instrument. Degree and prerequisite applicability for music majors is determined by the Butler School of Music.
MUEN	Music ensemble courses transfer with appropriate University course numbers where applicable, otherwise as generic semester hour credit in ensemble (ENS).
MUSI 1161	MUS 111E
MUSI 1166	MUS 101G
MUSI 1167	MUS 101G
MUSI 1168	MUS 101G
MUSI 1181	3
MUSI 1182	3
MUSI 1183	MUS 101G
MUSI 1184	MUS 101G
MUSI 1188	MUS 101G
MUSI 1190	MUS 101G
MUSI 1192	MUS 101G
MUSI 1193	MUS 101G
MUSI 1211	3
MUSI 1212	3
MUSI 1286	MUS 214C
MUSI 1287	MUS 214C
MUSI 1306	MUS 302L
MUSI 1310	MUS 307
MUSI 1311	MUS 605A
MUSI 1312	MUS 605B
MUSI 1386	1
MUSI 2116	3
MUSI 2117	3
MUSI 2167	MUS 101G
MUSI 2168	MUS 101G
MUSI 2181	3
MUSI 2182	3
MUSI 2183	MUS 101G
MUSI 2184	MUS 101G
MUSI 2188	MUS 101G
MUSI 2190	MUS 101G
MUSI 2192	MUS 101G
MUSI 2193	MUS 101G
MUSI 2211	3
MUSI 2212	3
MUSI 2216	MUS 411A
MUSI 2217	MUS 411B
MUSI 2286	MUS 214C
MUSI 2311	MUS 612A
MUSI 2312	MUS 612B

MUSI 2386	1
PHED 1151	PED 102G
PHED 1152	PED 102G
PHED 1153	(Topic 3 or 4) <sup>3</sup>
PHED 1206	KIN 213 (Topic 1)
PHED 1253	KIN 213 (Topic 3 or 4)
PHED 1306	(Topic 1) <sup>1</sup>
PHED 1308	1
PHED 1309	1
PHED 1321	1
PHED 1322	1
PHED 1331	KIN 314
PHED 2155	(Topic 2) <sup>3</sup>
PHED 2255	KIN 213 (Topic 2)
PHED 2355	(Topic 2) <sup>1</sup>
PHED 2356	KIN 312 (Topic 2)
PHIL 1301	PHL 301
PHIL 2303	PHL 312
PHIL 2306	PHL 318
PHIL 2307	PHL 318K
PHIL 2316	PHL 301K
PHIL 2321	PHL 305
PHYS 1101	PHY 102M
PHYS 1102	PHY 102N
PHYS 1105	PHY 1 LAB
PHYS 1107	PHY 1 LAB
PHYS 1103	AST 103L
PHYS 1104	AST 1 LAB
PHYS 1301	PHY 302K
PHYS 1302	PHY 302L
PHYS 1305	PHY 309K
PHYS 1307	PHY 309L
PHYS 1303	AST 301
PHYS 1304	AST 309
PHYS 1401	PHY 302K+102M
PHYS 1402	PHY 302L+102N
PHYS 1405	PHY 309K+1 LAB
PHYS 1407	PHY 309L+1 LAB
PHYS 1403	AST 301+103L
PHYS 1404	AST 309+1 LAB
PHYS 2125	PHY 103M <sup>6</sup>
PHYS 2126	PHY 103N <sup>6</sup>
PHYS 2325	PHY 303K <sup>6</sup>
PHYS 2326	PHY 303L <sup>6</sup>
PHYS 2425	PHY 303K+103M <sup>6</sup>
PHYS 2426	PHY 303L+103N <sup>6</sup>
PORT 1311	3
PORT 1312	3
PORT 1411	POR 406
PORT 1412	POR 407

PORT 1511	1
PORT 1512	1
PORT 2311	POR 312K
PORT 2312	POR 312L
PSYC 1100	EDP 110 (Topic 1)
PSYC 1200	EDP 210 (Topic 1)
PSYC 1300	EDP 310 (Topic 1)
PSYC 2301	PSY 301
PSYC 2308	PSY 304
PSYC 2316	PSY 309
PSYC 2317	PSY 317
PSYC 2319	PSY 319K
RUSS 1311	3
RUSS 1312	3
RUSS 1411	3
RUSS 1412	3
RUSS 1511	RUS 506
RUSS 1512	RUS 507
RUSS 2311	3
RUSS 2312	3
SGNL 1301	3
SGNL 1302	3
SGNL 1401	3
SGNL 1402	3
SGNL 1501	ASL 506
SGNL 1502	ASL 507
SGNL 2301	ASL 312K
SGNL 2302	ASL 312L
SOCI 1301	SOC 302
SOCI 1306	SOC 308
SOCI 2326	PSY 319K
SOCI 2339	SOC 318
SOCW 2361	S W 310
SPAN 1311	3
SPAN 1312	3
SPAN 1411	3
SPAN 1412	3
SPAN 1511	SPN 506
SPAN 1512	SPN 507
SPAN 2311	SPN 312K
SPAN 2312	SPN 312L
SPCH 1144	3
SPCH 1145	3
SPCH 1315	4
SPCH 1318	CMS 315M
SPCH 1321	CMS 306M
SPCH 2144	3
SPCH 2145	3
SPCH 2316	CMS 316L

SPCH 2333	CMS 310K
TECA 1303	HDF 304
TECA 1311	ALD 3 HRS
TECA 1318	KIN 3 HRS
TECA 1354	HDF 313
VIET 1311	3
VIET 1312	3
VIET 1411	3
VIET 1412	3
VIET 1511	VTN 506
VIET 1512	VTN 507
VIET 2311	3
VIET 2312	3

(or 2326 and 2126), which transfer as indicated. However, a few community colleges add a third course, PHYS 2427. In such cases, PHYS 2425 may transfer as Physics 301 and 101L; PHYS 2426 may transfer as Physics 316 and 116L; and PHYS 2427 may transfer either as Physics 315 and 115L or as generic physics credit.

7. For School of Architecture students, ARCH 1311 transfers as generic architecture credit and Architecture 308 must be taken in residence.

1. This is a modified course number with a higher credit value than is normally offered at the University. The higher value does not affect the course's applicability toward degree requirements.

2. Lower-division biology courses may transfer as generic credit, without a specific University course number. The terms "FLAB" and "SLAB" identify freshman- and sophomore-level combined lecture and laboratory credit; "FRMN" and "SOPH," freshman- and sophomore-level lecture credit; and "LAB," lower-division laboratory credit. For students in the School of Biological Sciences, such credit is applicable toward degrees only with department approval. For students in other degree plans that require specific biology courses, such credit is applicable toward degrees only with the approval of the student's academic dean. Introductory major-track lecture credit (TCCN BIOL 1406, 1407, 1306, or 1307) generally transfers as Biology 311C and 311D. Major-track laboratory credit (TCCN BIOL 1106, 1107, or the lab components of 1406 and 1407) generally transfers with the modified course numbers BIO 206LA and 206LB to reflect a lower credit value than is normally offered at the University.

Nonmajor lecture credit (TCCN BIOL 1408, 1409, 1308, or 1309) generally transfers as Biology 301L and 301M. Nonmajor laboratory credit (TCCN BIOL 1108, 1109, or the lab components of 1408 and 1409) transfers generically, because the University does not offer nonmajor lab courses.

3. This is a modified course number with a lower credit value than is normally offered at the University. In many cases, such transfer credit may be counted toward degree requirements in place of the higher-value University course; however, such substitution is at the discretion of the student's academic dean.

4. This is a course no longer offered at the University but still used in awarding transfer credit and still applicable toward certain degree requirements. For students in the School of Nursing, BIOL 2420, 2421, 2320, 2321, 2120, and 2121 transfer as retired microbiology courses.

5. Courses offered to fulfill the legislative requirement in government are not uniform in content and sequencing among schools. GOVT 2301 and 2302 transfer as Government 310L and 312L; GOVT 2305 and 2306 transfer as generic credit. It is strongly recommended that students complete the required two-course sequence, either GOVT 2301 and 2302 or GOVT 2305 and 2306, at one institution.

6. At most Texas community colleges, calculus-based physics is offered in a two-semester sequence represented by the TCCN designations PHYS 2425 (or 2325 and 2125) and 2426

## Appendix B: Course Abbreviations

The University offers courses in the following fields of study. The abbreviations in the second column are used in catalogs, course schedules, and student records. Some of the fields listed are offered only at the graduate level.

Field of Study	Abbreviation
Accounting	ACC
Actuarial foundations	ACF
Advertising	ADV
Aerospace engineering	ASE
African and African diaspora studies	AFR
Air force science	AFS
American Sign Language	ASL
American studies	AMS
Ancient history and classical civilization	AHC
Anthropology	ANT
Applied learning and development	ALD
Arabic	ARA
Archaeology	ARY
Architectural engineering	ARE
Architectural interior design	ARI
Architecture	ARC
Art education	AED
Art history	ARH
Asian American studies	AAS
Asian studies	ANS
Astronomy	AST
Bassoon	BSN
Bengali	BEN
Biochemistry	BCH
Biology	BIO
Biomedical engineering	BME
Bridging disciplines	BDP
Business administration	B A
Business, government, and society	BGS
Chemical engineering	CHE
Chemistry	CH
Chinese	CHI
Civil engineering	C E
Clarinet	CLA
Classical civilization	C C
Cognitive science	CGS
Communication	COM
Communication sciences and disorders	CSD
Communication studies	CMS
Community and regional planning	CRP
Comparative literature	C L
Computational science, engineering, and mathematics	CSE
Computer science	C S
Conducting	CON
Core texts and ideas	CTI

Cultural studies	CLS
Curriculum and instruction	EDC
Czech	CZ
Danish	DAN
Design	DES
Developmental studies	DEV
Double bass	D B
Drum set	DRS
Dutch	DCH
Economics	ECO
Educational administration	EDA
Educational psychology	EDP
Electrical engineering	E E
Energy and earth resources	EER
Engineering management	ENM
Engineering mechanics	E M
Engineering studies	E S
English	E
English as a second language	ESL
Ensemble	ENS
Environmental science	EVS
Euphonium	EUP
European studies	EUS
Finance	FIN
Fine arts	F A
Flute	FLU
Foreign language education	FLE
French	FR
French civilization	F C
French horn	F H
General engineering	G E
Geography	GRG
Geological sciences	GEO
German	GER
Germanic civilization	GRC
Government	GOV
Graduate school	GRS
Greek	GK
Guitar	GUI
Harp	HAR
Harpsichord	HSC
Health education	HED
Hebrew	HEB
Hindi	HIN
History	HIS
Human development and family sciences	HDF
Human ecology	H E
Humanities	HMN
Information studies	INF
International business	I B
International relations and global studies	IRG
Islamic studies	ISL
Italian	ITL
Italian civilization	ITC



Japanese	JPN	Portuguese civilization	PRC
Jewish studies	J S	Psychology	PSY
Journalism	J	Public affairs	P A
Kinesiology	KIN	Public health	PBH
Korean	KOR	Public relations	P R
Landscape architecture	LAR	Radio-television-film	RTF
Latin	LAT	Real estate	R E
Latin American studies	LAS	Recorder	REC
Law	LAW	Religious studies	R S
Legal environment of business	LEB	Rhetoric and writing	RHE
Liberal arts	L A	Risk management	R M
Liberal arts honors	LAH	Russian	RUS
Linguistics	LIN	Russian, East European, and Eurasian studies	REE
Malayalam	MAL	Sanskrit	SAN
Management	MAN	Saxophone	SAX
Management information systems	MIS	Scandinavian	SCA
Manufacturing systems engineering	MFG	Science	SCI
Marine science	MNS	Science and technology commercialization	STC
Marketing	MKT	Science, technology, and society	STS
Materials science and engineering	MSE	Science-mathematics education	SME
Mathematics	M	Serbian/Croatian	S C
Mechanical engineering	M E	Slavic	SLA
Medieval studies	MDV	Slavic and Eurasian languages	SEL
Mexican American studies	MAS	Social science	S S
Middle Eastern languages and cultures	MEL	Social work	S W
Middle Eastern studies	MES	Sociology	SOC
Military science	M S	Spanish	SPN
Molecular biology	MOL	Spanish civilization	SPC
Music	MUS	Special education	SED
Music business	MBU	Statistics	STA
Music recording technology	MRT	Statistics and scientific computation	SSC
Natural sciences	NSC	Studio art	ART
Naval science	N S	Swahili	SWA
Neuroscience	NEU	Swedish	SWE
Norwegian	NOR	Systems and synthetic biology	SSB
Nursing	N	Tamil	TAM
Nutrition	NTR	Telugu	TEL
Oboe	OBO	Textiles and apparel	TXA
Opera	OPR	Theatre and dance	T D
Operations management	O M	Trombone	TRO
Operations research and industrial engineering	ORI	Trumpet	TRU
Organ	ORG	Tuba	TBA
Pashto	PSH	Turkish	TUR
Percussion	PER	Tutorial course	T C
Persian	PRS	Undergraduate studies	UGS
Petroleum and geosystems engineering	PGE	Urban studies	URB
Pharmacy	PHR	Urdu	URD
Philosophy	PHL	UTeach-liberal arts	UTL
Physical education	PED	UTeach-natural sciences	UTS
Physical science	P S	Vietnamese	VTN
Physics	PHY	Vibraphone	VIB
Piano	PIA	Viola	VIA
Polish	POL	Violin	VIO
Portuguese	POR	Violoncello	V C

Visual art studies	VAS
Voice	VOI
Women's and gender studies	WGS
Writing	WRT
Yiddish	YID
Yoruba	YOR

# School of Architecture Faculty

Dean J Almy, Associate Professor  
School of Architecture  
MArch, University of Texas at Austin, 1989

Anthony Alofsin, Professor  
Roland Gommel Roessner Centennial Professorship in Architecture  
School of Architecture  
PhD, Columbia University in the City of New York, 1987

Kevin S Alter, Professor  
The Sid W. Richardson Centennial Professorship in Architecture  
School of Architecture  
MArch, Harvard University, 1990

John H Asher, Lecturer  
School of Architecture  
MLA, University of Texas at Austin, 2007

Simon D Atkinson, Professor  
Mike Hogg Professorship in Community and Regional Planning  
School of Architecture  
PhD, University of Sheffield, 1989

Karen O Banks, Lecturer  
School of Architecture  
MSCRP, University of Texas at Austin, 2011

Michael L Beaman, Assistant Professor  
School of Architecture  
MArch, Harvard University, 2003

M W Bell, Professor Emeritus  
School of Architecture  
BArch, University of Texas at Austin, 1960

Michael L Benedikt, Professor  
Hal Box Endowed Chair in Urbanism  
School of Architecture  
MEnvironD, Yale University, 1975

Miroslava Benes, Associate Professor  
School of Architecture  
PhD, Yale University, 1989

Judith C Birdsong, Lecturer  
School of Architecture  
MArch, University of Florida, 1992

James S Black, Professor  
Roberta P. Crenshaw Centennial Professorship in Urban Design and  
Environmental Planning  
School of Architecture  
MArch, University of California-Berkeley, 1970

John P Blood, Senior Lecturer  
School of Architecture  
MArch, Yale University, 1987

Jon A Bowman, Professor Emeritus  
School of Architecture  
MArch, University of Texas at Austin, 1962

Danelle Irene Briscoe, Assistant Professor  
School of Architecture

MArch, Yale University, 2002

Barbara B Brown Wilson, Assistant Professor  
School of Architecture  
PhD, University of Texas at Austin, 2010

David Bucek, Adjunct Associate Professor  
School of Architecture  
MArch, Harvard University, 1992

Charles O Cappleman, Associate Professor Emeritus  
School of Architecture  
MFA, University of Texas at Austin, 1966

Richard L Cleary, Professor  
School of Architecture  
PhD, Columbia University in the City of New York, 1986

Coleman Coker, Adjunct Professor  
School of Architecture  
MFA, Memphis College of Art, 1994

Peter O Coltman, Associate Professor Emeritus  
School of Architecture  
MS, University of Texas at Austin, 1965

Robert J Coote, Professor Emeritus  
School of Architecture  
MA, Harvard University, 1959

Ernesto Cragolino, Lecturer  
School of Architecture  
BArch, University of Texas at Austin, 1997

Ulrich C Dangel, Associate Professor  
School of Architecture  
MArch, University of Oregon, 1999

Elizabeth A Danze, Associate Professor  
School of Architecture  
MArch, Yale University, 1990

Derek Stephen Dellekamp, Visiting Professor  
School of Architecture  
BArch, Ibero-American University, 1997

Charles H Di Piazza, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 1996

Larry A Doll, Associate Professor  
School of Architecture  
MArch, Cornell University, 1974

Sarah Eileen Dooling, Assistant Professor  
School of Architecture  
PhD, University of Washington - Seattle, 2008

Lee Einsweiler, Lecturer  
School of Architecture  
MS, University of North Carolina at Chapel Hill, 1985

Matthew L Fajkus, Assistant Professor  
School of Architecture  
MArch, Harvard University, 2005

Frances Rogers Gale, Senior Lecturer  
School of Architecture

MS, Columbia University in the City of New York, 1982

Sarah Gamble, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 2005

Michael L Garrison, Professor  
School of Architecture  
MArch, Rice University, 1971

Carmen M Garufo, Lecturer  
School of Architecture  
BArch, Pratt Institute, 1966

Allison H Gaskins, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 2007

Robert E Gay, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 2005

Tamie Michele Glass, Assistant Professor  
School of Architecture  
MArch, University of Oregon, 2001

Francisco Henning Gomes, Assistant Professor  
School of Architecture  
MArch, Harvard University, 1995

Hope Hasbrouck, Associate Professor  
School of Architecture  
MLArch, Harvard University, 1996

David D Heymann, Professor  
Harwell Hamilton Harris Regents Professorship in Architecture  
School of Architecture  
MArch, Harvard University, 1988

Barbara Hoidn, Adjunct Associate Professor  
School of Architecture  
MArchE, Universitat Friedericiana Karlsruhe, 1988

Michael Holleran, Associate Professor  
School of Architecture  
PhD, Massachusetts Institute of Technology, 1991

Richard Wayne Jennings, Adjunct Professor  
School of Architecture  
PhD, Harvard University, 2008

Terry D Kahn, Professor  
David Bruton, Jr. Centennial Professorship in Urban Design  
School of Architecture  
PhD, University of California-Berkeley, 1970

Brian J Kelsey, Lecturer  
School of Architecture  
MPAff, University of Texas at Austin, 2004

Nancy P Kwallek, Professor  
Gene Edward Mikeska Endowed Chair for Interior Design  
School of Architecture  
PhD, Purdue University Main Campus, 1978

Christopher Paul Lalich, Lecturer  
School of Architecture

MLA, Texas Tech University, 2000

Fernando Luiz Lara, Assistant Professor  
School of Architecture  
PhD, University of Michigan-Ann Arbor, 2001

Daniel E Leary, Associate Professor Emeritus  
School of Architecture  
MArch, University of Pennsylvania, 1966

Ming-Chun Lee, Assistant Professor  
School of Architecture  
PhD, University of Washington - Seattle, 2008

Robert M Legge, Lecturer  
School of Architecture  
BArch, Cooper Union, 1990

Gerlinde Leiding, Professor Emeritus  
School of Architecture  
MArch, Yale University, 1966

Charlton N Lewis, Specialist  
School of Architecture  
BArch, University of Texas at Austin, 1995

Christopher A Long, Professor  
School of Architecture  
PhD, University of Texas at Austin, 1993

Sarah L Lopez, Assistant Professor  
School of Architecture  
PhD, University of California-Berkeley, 2011

Mark Macek, Specialist  
School of Architecture  
BArch, University of Texas at Austin, 1990

Deborah Mary Mann, Lecturer  
School of Architecture  
MS, University of Cape Town, 1996

Carl Matthews, Associate Professor  
School of Architecture  
MS, Pratt Institute, 1993

Talia Melanie McCray, Assistant Professor  
School of Architecture  
PhD, University of Michigan-Ann Arbor, 2001

Robert J Mezquiti, Lecturer  
School of Architecture  
MArch, Columbia University in the City of New York, 2006

S Milovanovic-Bertram, Associate Professor  
School of Architecture  
MArch, Harvard University, 1974

Juan Miro, Professor  
School of Architecture  
MArch, Yale University, 1991

Steven A Moore, Professor  
Bartlett Cocke Regents Professorship in Architecture  
School of Architecture  
PhD, Texas A & M University, 1996

Adrian Moreno, Visiting Associate Professor



Eugene McDermott Centennial Visiting Professorship  
School of Architecture  
BArch, Universidad Central del Ecuador, 1999

Elizabeth Mueller, Associate Professor  
School of Architecture  
PhD, University of California-Berkeley, 1992

Catherine Morris O'Connor, Lecturer  
School of Architecture  
MLA, Harvard University, 1994

Mark A Oberholzer, Lecturer  
School of Architecture  
MArch, Rice University, 1994

Michael Oden, Associate Professor  
School of Architecture  
PhD, New Sch for Soc Research, 1992

Clay D Odom, Lecturer  
School of Architecture  
MS, Columbia University in the City of New York, 2003

Robert G Paterson, Associate Professor  
School of Architecture  
PhD, University of North Carolina at Chapel Hill, 1993

Monica Penick, Lecturer  
School of Architecture  
PhD, University of Texas at Austin, 2007

Adam Aleksander Pyrek, Lecturer  
School of Architecture  
MA, Architectural Association School of Architecture, 2005

Peter S Raab, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 2007

Rachael Rawlins, Senior Lecturer  
School of Architecture  
JD, University of Texas at Austin, 1993

Edward Emile Richardson, Lecturer  
School of Architecture  
MArch, Yale University, 2004

Joyce Rosner, Senior Lecturer  
School of Architecture  
MArch, University of Houston, 1981

Stephen L Ross, Senior Lecturer  
School of Architecture  
MA, University of Texas at Austin, 1990

Jose Maria Saez Vaquero, Visiting Associate Professor  
Eugene McDermott Centennial Visiting Professorship  
School of Architecture  
BArch, Universidad Politecnica de Madrid (UPM), 1990

Jack D Sanders, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 2005

Stefan K Schuster, Lecturer  
School of Architecture

MS, University of Texas at Austin, 1996

Allan W Shearer, Assistant Professor  
School of Architecture  
PhD, Harvard University, 2003

Thomas C Shortall, Lecturer  
School of Architecture  
MArch, Washington University in St Louis, 2004

Keith A Shuley, Lecturer  
School of Architecture  
JD, University of Houston, 1981

Igor P Siddiqui, Assistant Professor  
School of Architecture  
MArch, Yale University, 2003

Mark T Simmons, Lecturer  
School of Architecture  
PhD, Texas A & M University, 2003

Keith Simon, Lecturer  
School of Architecture  
MArch, University of Oregon, 2004

Bjorn Ingmann Sletto, Assistant Professor  
School of Architecture  
PhD, Cornell University, 2006

Gregory W Smith, Lecturer  
School of Architecture  
MA, University of Delaware, 1991

Marla Smith, Lecturer  
School of Architecture  
MArch, University of Texas at Austin, 1996

Vincent L Snyder, Associate Professor  
School of Architecture  
MArch, Princeton University, 1988

Stephen M Sonnenberg, Adjunct Professor  
School of Architecture  
MD, Yeshiva University, 1965

Jason Spencer Sowell, Assistant Professor  
School of Architecture  
MArch, Harvard University, 2004

Lawrence W Speck, Professor  
The W. L. Moody, Jr. Centennial Professorship in Architecture  
School of Architecture  
MArch, Massachusetts Institute of Technology, 1972

Frederick R Steiner, Professor  
Henry M. Rockwell Chair in Architecture  
School of Architecture  
PhD, University of Pennsylvania, 1986

William F Stern, Adjunct Associate Professor  
School of Architecture  
MArch, Harvard University, 1973

Richard P Swallow, Professor Emeritus  
School of Architecture  
MArch, Massachusetts Institute of Technology, 1957

Rabun M Taylor, Assistant Professor  
School of Architecture  
PhD, University of Minnesota-Twin Cities, 1997

Charles Kevin Thompson, Specialist  
School of Architecture  
BArch, University of Texas at Austin, 1981

Danilo F Udovicki, Associate Professor  
School of Architecture  
PhD, Massachusetts Institute of Technology, 1995

Gary Wang, Lecturer  
School of Architecture  
MArch, University of Michigan-Ann Arbor, 1998

Wilfried Wang, Professor  
O'Neil Ford Centennial Chair in Architecture  
School of Architecture  
MS, University College London, 1981

Lois Weinthal, Associate Professor  
School of Architecture  
MArch, Cranbrook Academy of Art, 1998

Dason M Whitsett, Lecturer  
School of Architecture  
MS, University of Texas at Austin, 2005

Nichole Wiedemann, Associate Professor  
School of Architecture  
MA, Princeton University, 1992

Roxanne K Williamson, Professor Emeritus  
School of Architecture  
MA, University of Texas at Austin, 1965

Patricia A Wilson, Professor  
School of Architecture  
PhD, Cornell University, 1975

Chen Ching D Yang, Lecturer  
School of Architecture  
PhD, Texas A & M University, 2001

Ming Zhang, Associate Professor  
School of Architecture  
PhD, Massachusetts Institute of Technology, 2002

## Red McCombs School of Business Faculty

Robert J Adams, Lecturer  
Department of Management  
PhD, Capella University, 2007

Ashish Agarwal, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, Carnegie Mellon University, 2009

James William Albrecht, Lecturer  
Department of Accounting  
BBA, University of Texas at Austin, 1975

Joshua D Alexander, Lecturer  
Department of Finance  
MBA, University of Pennsylvania, 2009

John R Allison, Professor  
Mary John and Ralph Spence Centennial Professorship  
Business, Government and Society  
JD, Baylor University, 1972

Andres Almazan, Professor  
Department of Finance  
PhD, Massachusetts Institute of Technology, 1996

Mark I Alpert, Professor  
Foley's Professorship in Retailing  
Department of Marketing  
DBA, University of Southern California, 1968

Aydogan Altı, Associate Professor  
Department of Finance  
PhD, Carnegie Mellon University, 2002

Emily Tara Amanatullah, Assistant Professor  
Department of Management  
PhD, Columbia University in the City of New York, 2007

Edward G Anderson, Associate Professor  
Department of Information, Risk, and Operations Management  
Department of Management  
PhD, Massachusetts Institute of Technology, 1997

Mary A Anderson, Lecturer  
Department of Information, Risk, and Operations Management  
MS, Massachusetts Institute of Technology, 1997

Urton L Anderson, Professor  
Clark W. Thompson, Jr. Professorship in Accounting Education  
Department of Accounting  
PhD, University of Minnesota-Twin Cities, 1985

Jeffrey S Andrien, Lecturer  
Department of Marketing  
MBA, University of Texas at Austin, 2005

Fernando Antonio Nunes Dionisio Anjos, Assistant Professor  
Department of Finance  
PhD, Carnegie Mellon University, 2008

Patricia M Arnold, Lecturer  
Department of Information, Risk, and Operations Management  
BA, University of Texas at Austin, 1970

Victor L Arnold, Professor Emeritus  
Department of Management  
PhD, University of Wisconsin-Madison, 1971

Mihran A Aroian, Lecturer  
Department of Management  
MBA, University of Texas at Austin, 1988

Florence J Atiase, Lecturer  
Department of Accounting  
MAcc, University of Florida, 1983

Rowland Atiase, Professor  
Department of Accounting  
PhD, University of California-Berkeley, 1980

Patrick G Badolato, Clinical Assistant Professor  
Department of Accounting  
PhD, Duke University, 2010

Uttarayan Bagchi, Professor  
Department of Information, Risk, and Operations Management  
PhD, Pennsylvania State University Main Campus, 1985

Mark B Baker, Associate Professor Emeritus  
Department of Information, Risk, and Operations Management  
JD, Southern Methodist University, 1974

Anantaram Balakrishnan, Professor  
Kenneth M. and Susan T. Jastrow II Chair in Business  
Department of Information, Risk, and Operations Management  
PhD, Massachusetts Institute of Technology, 1985

Michael J Barrett, Lecturer  
Department of Management  
PhD, University of Texas at Austin, 1994

Caroline A Bartel, Associate Professor  
Department of Management  
PhD, University of Michigan-Ann Arbor, 1998

Anitesh Barua, Professor  
Mr. and Mrs. William F. Wright, Jr. Centennial Professorship for  
Management of Innovative Technology  
Department of Information, Risk, and Operations Management  
PhD, Carnegie Mellon University, 1990

Cynthia M Beath, Professor Emeritus  
Department of Information, Risk, and Operations Management  
PhD, University of California-Los Angeles, 1986

Ben Bentzin, Lecturer  
Department of Marketing  
MBA, University of Pennsylvania, 1992

Y Sekou Bermiss, Assistant Professor  
Department of Management  
PhD, Northwestern University, 2009

Calvin P Blair, Professor Emeritus  
Department of Marketing  
PhD, University of Texas at Austin, 1957

Jason S Boulette, Lecturer  
Business, Government and Society  
JD, University of Texas at Austin, 1997

Mark L Bradshaw, Lecturer  
Department of Accounting  
JD, University of Texas at Austin, 1988

Floyd S Brandt, Professor Emeritus  
Department of Management  
DBA, Harvard University, 1960

Dean A Bredeson, Senior Lecturer  
Business, Government and Society  
JD, University of Texas at Austin, 1995

Patrick L Brockett, Professor  
Gus Wortham Memorial Chair in Risk Management and Insurance  
Department of Information, Risk, and Operations Management  
Department of Finance  
PhD, University of California-Irvine, 1975

Susan M Broniarczyk, Professor  
Sam Barshop Centennial Professorship in Marketing Administration  
Department of Marketing  
PhD, University of Florida, 1992

Keith C Brown, Professor  
Department of Finance  
PhD, Purdue University Main Campus, 1981

Patti J Brown, Lecturer  
Department of Accounting  
MPA, University of Texas at Austin, 1989

Ethan R Burris, Associate Professor  
Department of Management  
PhD, Cornell University, 2005

John Burrows, Lecturer  
Department of Management  
PhD, Tulane University, 2003

John C Butler, Clinical Associate Professor  
Department of Finance  
PhD, University of Texas at Austin, 1998

Johnny S Butler, Professor  
Herb Kelleher Chair in Entrepreneurship, J. Marion West Chair for  
Constructive Capitalism  
Department of Management  
PhD, Northwestern University, 1974

Richard L Byars, Distinguished Senior Lecturer  
Department of Information, Risk, and Operations Management  
MA, University of Texas at Austin, 1973

Joseph D Cahoon, Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 2005

Shelby H Carter, Adjunct Professor  
Department of Marketing  
BBA, University of Texas at Austin, 1953

Carlos Marinho Carvalho, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, Duke University, 2006

Judson Caskey, Assistant Professor  
Department of Accounting  
PhD, University of Michigan-Ann Arbor, 2006

William T Charlton, Senior Lecturer  
Department of Finance  
PhD, University of Texas at Austin, 1994

Gretchen B Charrier, Lecturer  
Department of Accounting  
MPA, University of Texas at Austin, 1996

Shuping Chen, Associate Professor  
Department of Accounting  
PhD, University of Southern California, 2003

Charles T Clark, Professor Emeritus  
Department of Information, Risk, and Operations Management

PhD, University of Texas at Austin, 1956

Michael B Clement, Professor  
Department of Accounting  
PhD, Stanford University, 1997

Natalie A Clogston, Lecturer  
Department of Marketing  
MEd, University of Texas at Austin, 2007

Jonathan B Cohn, Assistant Professor  
Department of Finance  
PhD, University of Michigan-Ann Arbor, 2008

William W Cooper, Professor Emeritus  
Department of Information, Risk, and Operations Management  
Department of Finance  
DSc, University of Chicago, 1970

Brett L Cornwell, Lecturer  
Red McCombs School of Business  
MBA, Texas A & M University, 1991

Laura J Cortez, Lecturer  
Department of Management  
PhD, University of Texas at Austin, 2011

Stephen E Courter, Lecturer  
Department of Management  
MSBA, George Washington University, 1982

Eli P Cox, Professor  
La Quinta Motor Inns, Inc. Centennial Professorship in Business  
Department of Marketing  
DBA, Indiana University at Bloomington, 1973

Frank B Cross, Professor  
Herbert D. Kelleher Centennial Professorship in Business Law  
Business, Government and Society  
JD, Harvard University, 1980

Craig Richard Crossland, Assistant Professor  
Department of Management  
PhD, Penn State University Park, 2008

William H Cunningham, Professor  
James L. Bayless Chair for Free Enterprise  
Department of Marketing  
PhD, Michigan State University, East Lansing, 1971

John A Daly, Professor  
Texas Commerce Bancshares, Inc. Centennial Professorship  
in Business Communication, Frank A. Liddell, Sr. Centennial  
Professorship in Communication  
Department of Management  
PhD, Purdue University Main Campus, 1977

Paul Damien, Professor  
B. M. (Mack) Rankin, Jr. Professorship in Business Administration  
Department of Information, Risk, and Operations Management  
Department of Finance  
PhD, University of London, 1994

Elizabeth Andrea Danon-Leva, Lecturer  
Department of Marketing  
DIBA, Nova Southeastern University, 2006

James W Deitrick, Professor  
Department of Accounting  
DBA, University of Tennessee, 1977

Jade S DeKinder, Assistant Professor  
Department of Marketing  
PhD, Emory University, 2007

Douglas P Devidal, Lecturer  
Department of Accounting  
PhD, University of Texas at Austin, 1991

Douglas R Dierking, Senior Lecturer  
Department of Management  
PhD, University of Texas at Austin, 1997

Andrew P Dillon, Professor  
Louis T. Yule Regents Professorship in Library and Information  
Science  
Department of Information, Risk, and Operations Management  
PhD, Loughborough University, 1991

Edward D Doan, Lecturer  
Department of Information, Risk, and Operations Management  
MS, University of Texas at Austin, 2005

David M Dodd, Lecturer  
Department of Marketing  
JD, Texas Tech University, 1978

John N Doggett, Senior Lecturer  
Department of Management  
MBA, Harvard University, 1981

Andres Francisco Donangelo, Assistant Professor  
Department of Finance  
PhD, University of California-Berkeley, 2011

Dain Donelson, Assistant Professor  
Business, Government and Society  
PhD, University of Illinois at Urbana-Champaign, 2007

Alejandro Herman Drexler, Assistant Professor  
Department of Finance  
PhD, Massachusetts Institute of Technology, 2009

Jun A Duan, Assistant Professor  
Department of Marketing  
PhD, Duke University, 2006

Janet M Dukerich, Professor  
Harkins & Company Centennial Chair  
Department of Management  
PhD, University of Minnesota-Twin Cities, 1985

Mary B Dunn, Lecturer  
Department of Management  
MBA, University of California-Irvine, 1999

Sharon A Dunn, Lecturer  
Department of Information, Risk, and Operations Management  
PhD, University of Texas at Austin, 2002

Robert C Duvic, Distinguished Senior Lecturer  
Department of Finance  
PhD, University of Texas at Austin, 1990

James S Dyer, Professor



The Fondren Foundation Centennial Chair in Business  
Department of Information, Risk, and Operations Management  
Department of Management  
PhD, University of Texas at Austin, 1969

Kathleen A Edwards, Senior Lecturer  
Department of Management  
PhD, University of Texas at Austin, 1997

Megan Jean Ehrisman, Lecturer  
Department of Marketing  
MA, Ball State University, 2008

Tatiana Encheva, Lecturer  
Department of Information, Risk, and Operations Management  
PhD, Belarusian State University, 1989

Qi Feng, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, University of Texas at Dallas, 2006

Greta Contreras Fenley, Lecturer  
Department of Marketing  
MS, University of Oklahoma Health Sciences Center, 1999

James A Fitzsimmons, Professor Emeritus  
Department of Information, Risk, and Operations Management  
PhD, University of California-Los Angeles, 1970

Anna C Fowler, Professor Emeritus  
Department of Accounting  
PhD, University of Texas at Austin, 1977

Cesare Fracassi, Assistant Professor  
Department of Finance  
PhD, University of California-Los Angeles, 2009

James Andrew Franklin, Lecturer  
Department of Accounting  
MPA, University of Texas at Austin, 1993

James W Fredrickson, Professor  
Tom E. Nelson, Jr. Regents Professorship in Business  
Department of Management  
PhD, University of Washington - Seattle, 1980

Robert N Freeman, Professor  
Arthur Andersen & Co. Alumni Centennial Professorship in Accounting  
Department of Accounting  
PhD, University of Texas at Austin, 1977

Robert B Freund, Senior Lecturer  
Department of Information, Risk, and Operations Management  
PhD, Cornell University, 1995

Alessandro U Gabbi, Lecturer  
Department of Marketing  
MBA, University of Texas at Austin, 1997

George W Gau, Professor  
George S. Watson Centennial Professorship in Real Estate, J. Ludwig  
Mosle Centennial Memorial Professorship in Investments and Money  
Management  
Department of Finance  
PhD, University of Illinois at Urbana-Champaign, 1975

Gail A Gemberling, Distinguished Senior Lecturer

Department of Information, Risk, and Operations Management  
PhD, University of Texas at Austin, 1983

Robert E George, Lecturer  
Department of Accounting  
BBA, University of North Texas, 1971

Linda V Gerber, Senior Lecturer  
Department of Marketing  
PhD, University of Texas at Austin, 1983

Andrew D Gershoff, Associate Professor  
Department of Marketing  
PhD, University of Texas at Austin, 1999

Stephen M Gilbert, Professor  
Sam P. Woodson, Jr. Centennial Memorial Professorship in Business  
Department of Information, Risk, and Operations Management  
Department of Management  
PhD, Massachusetts Institute of Technology, 1992

Janet D Gillespie, Lecturer  
Department of Accounting  
Department of Accounting  
MBA, Western Washington University, 1982

Kate Gillespie, Associate Professor  
Department of Marketing  
PhD, University of London, 1983

Thomas W Gilligan, Professor  
Centennial Chair in Business Education Leadership, Jack R. Crosby  
Regents Chair in Business Administration  
Department of Finance  
PhD, Washington University in St Louis, 1984

Linda L Golden, Professor  
Marlene and Morton Meyerson Centennial Professorship in Business  
Department of Marketing  
PhD, University of Florida, 1975

Melissa E Graebner, Associate Professor  
Department of Management  
PhD, Stanford University, 2001

Randi L Graham, Lecturer  
Department of Marketing  
MBA, Yale University, 2006

Brian E Graham-Moore, Professor Emeritus  
Department of Management  
PhD, Washington University in St Louis, 1970

Michael H Granof, Professor  
Ernst & Young Distinguished Centennial Professorship of Accounting  
Department of Accounting  
PhD, University of Michigan-Ann Arbor, 1972

Richard D Grant, Lecturer  
Department of Marketing  
PhD, University of Texas at Austin, 1973

Kathryn L Gray, Lecturer  
Department of Information, Risk, and Operations Management  
MS, Texas A & M University, 2004

Robert T Green, Professor Emeritus

Department of Marketing  
PhD, Pennsylvania State University Main Campus, 1971

Betsy S Greenberg, Associate Professor  
Department of Information, Risk, and Operations Management  
PhD, University of California-Berkeley, 1986

Charles H Griffin, Professor Emeritus  
Department of Accounting  
PhD, University of Texas at Austin, 1950

John M Griffin, Professor  
Department of Finance  
PhD, Ohio State U Main Campus, 1997

Bin Gu, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, University of Pennsylvania, 2002

Genaro J Gutierrez, Associate Professor  
Department of Information, Risk, and Operations Management  
Department of Management  
PhD, Stanford University, 1988

Beverly L Hadaway, Associate Professor  
Department of Finance  
PhD, The University of Alabama, 1981

Greg F Hallman, Senior Lecturer  
Department of Finance  
PhD, University of Texas at Austin, 1996

Bing Han, Associate Professor  
Department of Finance  
PhD, University of California-Los Angeles, 2002

Roy D Harris, Professor Emeritus  
Department of Management  
PhD, University of California-Los Angeles, 1965

David A Harrison, Professor  
Charles and Elizabeth Prothro Regents Chair in Business  
Administration  
Department of Management  
PhD, University of Illinois at Urbana-Champaign, 1988

Jay C Hartzell, Professor  
Department of Finance  
PhD, University of Texas at Austin, 1998

Michael Graham Hasler, Lecturer  
Department of Information, Risk, and Operations Management  
MBA, University of Virginia, 1985

Pamela R Haunschild, Professor Emeritus  
Department of Management  
PhD, Carnegie Mellon University, 1992

Isadore B Helburn, Professor Emeritus  
Department of Management  
PhD, University of Wisconsin-Madison, 1966

Andrew D Henderson, Associate Professor  
Department of Management  
PhD, University of Texas at Austin, 1996

Ty Thomas Henderson, Assistant Professor  
Department of Marketing

PhD, University of Wisconsin-Madison, 2006

Karl E Henion, Professor Emeritus  
Department of Marketing  
PhD, University of Texas at Austin, 1967

Jonathan E Highbarger, Lecturer  
Department of Marketing  
BBA, University of Texas at Austin, 1971

D E Hirst, Professor  
The John Arch White Professorship in Business  
Department of Accounting  
PhD, University of Minnesota-Twin Cities, 1992

Terri Holbrook, Lecturer  
Department of Accounting  
MS, University of Texas at Arlington, 1991

Dorothee Honhon, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, New York University, 2006

Wayne D Hoyer, Professor  
James L. Bayless/W. S. Farish Fund Chair for Free Enterprise  
Department of Marketing  
PhD, Purdue University Main Campus, 1980

Jennifer Huang, Associate Professor  
Department of Finance  
PhD, Massachusetts Institute of Technology, 2003

George P Huber, Professor Emeritus  
Department of Management  
PhD, Purdue University Main Campus, 1966

David L Huff, Professor Emeritus  
Department of Marketing  
PhD, University of Washington - Seattle, 1960

Regina W Hughes, Senior Lecturer  
Department of Finance  
MS, University of North Texas, 1982

Julie R Irwin, Professor  
Department of Marketing  
PhD, University of Colorado at Boulder, 1992

Kapil Jain, Senior Lecturer  
Department of Marketing  
PhD, Columbia University in the City of New York, 1990

Sirkka L Jarvenpaa, Professor  
James L. Bayless/Rauscher Pierce Refsnes, Inc. Chair in Business  
Administration  
Department of Information, Risk, and Operations Management  
PhD, University of Minnesota-Twin Cities, 1986

David B Jemison, Professor  
Foster Parker Centennial Professorship of Finance and Management  
Department of Management  
Department of Management  
PhD, University of Washington - Seattle, 1978

Ross G Jennings, Professor  
Department of Accounting  
PhD, University of California-Berkeley, 1987

Jeffrey L Johanns, Lecturer  
Department of Accounting  
BS, University of Illinois at Urbana-Champaign, 1977

Daniel J Johnedis, Lecturer  
Department of Finance  
MBA, College of William and Mary, 1986

Travis Johnson, Assistant Professor  
Department of Finance  
PhD, Stanford University, 2012

Eleanor W Jordan, Professor Emeritus  
Department of Information, Risk, and Operations Management  
Department of Information, Risk, and Operations Management  
PhD, University of Texas at Austin, 1978

Stephanie C Jue, Lecturer  
Business, Government and Society  
JD, South Texas College of Law, 2002

Steven J Kachelmeier, Professor  
Randal B. McDonald Chair in Accounting  
Department of Accounting  
PhD, University of Florida, 1988

J W Kamas, Lecturer  
Department of Accounting  
MBA, University of Chicago, 1991

Kelly L Kamm, Senior Lecturer  
Department of Finance  
PhD, University of Texas at Austin, 1992

Matthew Kammer-Kerwick, Lecturer  
Department of Information, Risk, and Operations Management  
PhD, University of Texas at Austin, 1993

Ethan B Kapstein, Professor  
Dennis O'Connor Regents Professorship in Business  
Department of Information, Risk, and Operations Management  
PhD, Tufts University, 1986

Orlando R Kelm, Associate Professor  
Department of Marketing  
PhD, University of California-Berkeley, 1989

Carey W King, Lecturer  
Business, Government and Society  
PhD, University of Texas at Austin, 2004

William R Kinney, Professor  
Charles and Elizabeth Prothro Regents Chair in Business  
Department of Accounting  
PhD, Michigan State University, East Lansing, 1968

Amanda J Kious, Lecturer  
Department of Marketing  
MS, Texas Tech University, 2006

Shimon Kogan, Assistant Professor  
Department of Finance  
PhD, University of California-Berkeley, 2005

Prabhudev C Konana, Professor  
William H. Seay Centennial Professorship in Business  
Department of Information, Risk, and Operations Management

PhD, University of Arizona, 1995

Lisa L Koonce, Professor  
Deloitte & Touche Chair in Accounting  
Department of Accounting  
PhD, University of Illinois at Urbana-Champaign, 1990

Guoming Lai, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, Carnegie Mellon University, 2009

Kermit D Larson, Professor Emeritus  
Department of Accounting  
DBA, University of Colorado at Boulder, 1966

Leon S Lasdon, Professor  
David Bruton, Jr. Centennial Chair in Business Decision Support Systems  
Department of Information, Risk, and Operations Management  
PhD, Case Western Reserve University, 1964

Volker Laux, Associate Professor  
Department of Accounting  
PhD, Johann Wolfgang Goethe University, 2003

Anthony Leddin, Visiting Professor  
Business, Government and Society  
PhD, University College Dublin, 1987

Sanford J Leeds, Senior Lecturer  
Department of Finance  
JD, University of Virginia, 1989

Brian R Lendecky, Lecturer  
Department of Accounting  
MPA, University of Texas at Austin, 1999

Kyle Lewis, Associate Professor  
Department of Management  
PhD, University of Maryland College Park, 1999

Luci K Leykum, Adjunct Associate Professor  
Department of Information, Risk, and Operations Management  
MD, Columbia University in the City of New York, 1999

Patricia A Libby, Visiting Associate Professor  
Department of Accounting  
PhD, University of Michigan-Ann Arbor, 1984

Stephen T Limberg, Professor  
PricewaterhouseCoopers Centennial Professorship in Accounting  
Department of Accounting  
PhD, Arizona State University Main, 1982

Kristie J Loescher, Senior Lecturer  
Department of Management  
PhD, Nova Southeastern University, 2004

William J Lord, Professor Emeritus  
Department of Information, Risk, and Operations Management  
PhD, University of Illinois at Urbana-Champaign, 1961

James Richard Lowery, Assistant Professor  
Department of Finance  
PhD, Carnegie Mellon University, 2009

Kathleen S Mackie, Senior Lecturer  
Department of Marketing

PhD, University of Texas at Austin, 1995

Stephen P Magee, Professor  
James L. Bayless/Enstar Corp. Chair in Business Administration  
Department of Finance  
PhD, Massachusetts Institute of Technology, 1969

Vijay Mahajan, Professor  
John P. Harbin Centennial Chair in Business  
Department of Marketing  
PhD, University of Texas at Austin, 1975

Arthur B Markman, Professor  
Annabel Irion Worsham Centennial Professorship in Liberal Arts  
Department of Marketing  
PhD, University of Illinois at Urbana-Champaign, 1992

Melissa Martinez, Lecturer  
Department of Marketing  
MA, Texas State University-San Marcos, 2005

Luis D I Martins, Associate Professor  
Department of Management  
PhD, New York University, 1997

Susan Nell Masson, Lecturer  
Department of Marketing  
MEd, University of South Carolina - Columbia, 2001

Robert G May, Professor  
KPMG Centennial Professorship  
Department of Accounting  
PhD, Michigan State University, East Lansing, 1970

Leigh M McAlister, Professor  
Ed and Molly Smith Chair in Business Administration  
Department of Marketing  
PhD, Stanford University, 1978

Christopher McClellan, Lecturer  
Department of Information, Risk, and Operations Management  
MBA, University of Texas at Austin, 1990

Robert E McCulloch, Professor  
Century Club Professorship  
Department of Information, Risk, and Operations Management  
PhD, University of Minnesota-Twin Cities, 1985

Reuben R McDaniel, Professor  
Charles and Elizabeth Prothro Regents Chair in Health Care  
Management  
Department of Information, Risk, and Operations Management  
EdD, Indiana University at Bloomington, 1971

Rory Morgan Mcdonald, Assistant Professor  
Department of Management  
PhD, Stanford University, 2011

John M McInnis, Assistant Professor  
Department of Accounting  
PhD, University of Iowa, 2008

Christopher H Meakin, Senior Lecturer  
Business, Government and Society  
JD, University of Houston, 1987

Morgan E Medina, Lecturer  
Department of Marketing  
MS, Texas A & M University, 2008

Rafael Mendoza-Arriaga, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, Northwestern University, 2009

Eli Delane Mercer, Lecturer  
Department of Management  
MS, University of Texas at Austin, 2009

Herbert A Miller, Senior Lecturer  
Department of Marketing  
BS, University of Hartford, 1968

James D Miller, Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 2007

Lillian Fawn Mills, Professor  
The Wilton E. and Catherine A. Thomas Professorship in Accounting  
Department of Accounting  
PhD, University of Michigan-Ann Arbor, 1996

Douglas J Morrice, Professor  
Bobbie and Coulter R. Sublett Centennial Professorship  
Department of Information, Risk, and Operations Management  
Department of Management  
PhD, Cornell University, 1990

Ellen B Morrison, Lecturer  
Department of Management  
MS, University of Texas Health Science Center at Houston, 1973

John R Mote, Associate Professor  
Department of Information, Risk, and Operations Management  
PhD, University of Texas at Austin, 1979

Paula C Murray, Professor  
Business, Government and Society  
JD, University of Texas at Austin, 1980

Kumar Muthuraman, Associate Professor  
Department of Information, Risk, and Operations Management  
PhD, Stanford University, 2003

Donald P Newman, Professor  
Clark W. Thompson, Jr. Chair in Accounting  
Department of Accounting  
PhD, University of Texas at Austin, 1977

James A Nolen, Distinguished Senior Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 1976

William Patrick O'Hara, Lecturer  
Department of Accounting  
BBA, University of Texas at Austin, 1968

Robert Parrino, Professor  
Lamar Savings Centennial Professorship in Finance  
Department of Finance  
PhD, University of Rochester, 1992

Dennis S Passovoy, Lecturer  
Department of Management  
MA, University of California-Los Angeles, 1974



Jeffery R Patterson, Lecturer  
Business, Government and Society  
PhD, University of Texas at Austin,

Elota Patton, Senior Lecturer  
Department of Information, Risk, and Operations Management  
MFA, University of Texas at Austin, 1976

Frances Ann Pedersen, Lecturer  
Business, Government and Society  
JD, Boston University, 1985

Robert A Peterson, Professor  
John T. Stuart III Centennial Chair in Business  
Department of Marketing  
PhD, University of Minnesota-Twin Cities, 1970

William T Peterson, Lecturer  
Department of Marketing  
MBA, Southern Methodist University, 1984

John L Pierce, Harrington Faculty Fellow  
Business, Government and Society  
PhD, University of California-Berkeley, 2005

David E Platt, Senior Lecturer  
Department of Accounting  
PhD, Cornell University, 1997

Francisco Polidoro, Assistant Professor  
Department of Management  
PhD, University of Michigan-Ann Arbor, 2006

Mary L Poloskey, Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 1988

Robert A Prentice, Professor  
Ed and Molly Smith Centennial Professorship in Business Law  
Business, Government and Society  
JD, Washburn University, 1975

Amit K Puri, Lecturer  
Department of Marketing  
MEd, University of Missouri - Columbia, 2009

Rajagopal Raghunathan, Associate Professor  
Department of Marketing  
PhD, New York University, 2000

Raghunath S Rao, Assistant Professor  
Department of Marketing  
PhD, University of Minnesota-Twin Cities, 2007

Ramesh K Rao, Professor  
The Margaret and Eugene McDermott Centennial Professorship of  
Banking and Finance  
Department of Finance  
DBA, Indiana University at Bloomington, 1978

Richard B Ratliff, Lecturer  
Department of Accounting  
MS, University of North Texas, 1981

Janet J Riekenberg, Lecturer  
Department of Management  
PhD, University of Texas at Austin, 2010

Violina P Rindova, Professor  
Ralph B. Thomas Professorship in Business  
Department of Management  
PhD, New York University, 1999

M K Roberts, Lecturer  
Department of Marketing  
JD, University of Texas at Austin, 2007

Jack C Robertson, Professor Emeritus  
Department of Accounting  
PhD, University of North Carolina at Chapel Hill, 1970

John R Robinson, Professor  
C. Aubrey Smith Professorship in Accounting  
Department of Accounting  
PhD, University of Michigan-Ann Arbor, 1981

Joshua Thomas Rock, Lecturer  
Department of Information, Risk, and Operations Management  
MS, University of Texas at Austin, 2010

Ehud I Ronn, Professor  
Department of Finance  
PhD, Stanford University, 1983

Maytal Saar-Tsechansky, Associate Professor  
Department of Information, Risk, and Operations Management  
PhD, New York University, 2002

Michael A Sadler, Senior Lecturer  
Department of Finance  
PhD, University of Texas at Austin, 1997

Thomas W Sager, Professor  
Department of Information, Risk, and Operations Management  
PhD, University of Iowa, 1973

Alessio Alberto Saretto, Assistant Professor  
Department of Finance  
PhD, California State University-Los Angeles, 2006

Jaime Joy Schmidt, Assistant Professor  
Department of Accounting  
PhD, Texas A & M University, 2009

Jan Schneider, Assistant Professor  
Department of Finance  
PhD, University of British Columbia, 2006

Vito A Sciaraffia, Assistant Professor  
Department of Finance  
MA, University of California-Berkeley, 2011

James G Scott, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, Duke University, 2009

W W Scott, Lecturer  
Department of Accounting  
MBA, University of Texas of the Permian Basin, 1976

Jeri Kristina Seidman, Assistant Professor  
Department of Accounting  
PhD, Massachusetts Institute of Technology, 2008

Sridhar Seshadri, Professor  
Department of Information, Risk, and Operations Management

PhD, University of California-Berkeley, 1993

Billy M Shaw, Professor Emeritus  
Department of Information, Risk, and Operations Management  
LLM, University of Texas at Austin, 1972

Thomas S Shively, Professor  
Joe B. Cook Professorship in Business Administration  
Department of Information, Risk, and Operations Management  
PhD, University of Chicago, 1986

Clemens Sialm, Associate Professor  
Department of Finance  
PhD, Stanford University, 2001

Timothy T Simin, Visiting Associate Professor  
Department of Finance  
PhD, University of Washington - Seattle, 2002

Stuart R Singer, Lecturer  
Department of Accounting  
JD, Columbia University in the City of New York, 1965

Stephen T Smith, Lecturer  
Department of Accounting  
MS, University of Virginia, 1994

Jeremy Lee Smitheal, Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 2003

Susan B Snyder, Lecturer  
Business, Government and Society  
JD, University of Texas at Austin, 1989

Garrett P Sonnier, Assistant Professor  
Department of Marketing  
PhD, University of California-Los Angeles, 2006

Lewis J Spellman, Professor  
Department of Finance  
PhD, Stanford University, 1971

David B Spence, Associate Professor  
Business, Government and Society  
PhD, Duke University, 1997

Rajashri Srinivasan, Associate Professor  
Department of Marketing  
PhD, Pennsylvania State University Main Campus, 2000

Laura T Starks, Professor  
Charles E. and Sarah M. Seay Regents Chair in Finance  
Department of Finance  
PhD, University of Texas at Austin, 1981

Janet H Starnes, Lecturer  
Department of Management  
MS, Texas A & M University - Kingsville, 1974

Deidra G Stephens, Lecturer  
Department of Management  
PhD, University of Nebraska - Lincoln, 2009

Veronica V Stidvent, Lecturer  
Business, Government and Society  
JD, Yale University, 1999

Edward L Summers, Professor Emeritus  
Department of Accounting  
PhD, University of Texas at Austin, 1965

William B Swann, Professor  
William Howard Beasley III Professorship in the Graduate School of  
Business  
Department of Management  
PhD, University of Minnesota-Twin Cities, 1978

Huseyin Tanriverdi, Associate Professor  
Department of Information, Risk, and Operations Management  
DBA, Boston University, 2001

Frenkel Ter Hofstede, Associate Professor  
Department of Marketing  
PhD, Wageningen University, 1999

Monica Thompson, Lecturer  
Department of Marketing  
MS, Texas A & M University, 2003

Andrew M Thornley, Lecturer  
Business, Government and Society  
JD, Harvard University, 2005

Sheridan Titman, Professor  
Walter W. McAllister Centennial Chair in Financial Services  
Department of Finance  
PhD, Carnegie Mellon University, 1981

Efstathios Tompaidis, Associate Professor  
Department of Information, Risk, and Operations Management  
Department of Finance  
PhD, University of Texas at Austin, 1994

Heidi K Toprac, Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 1991

Lawrence M Turner, Lecturer  
Department of Finance  
MA, The University of Memphis, 1970

John C Tuttle, Lecturer  
Department of Information, Risk, and Operations Management  
BBA, University of Texas at Austin, 2003

Canan Ulu, Assistant Professor  
Department of Information, Risk, and Operations Management  
PhD, Duke University, 2007

David B Verduzco, Lecturer  
Department of Accounting  
MPA, University of Texas at Austin, 1993

Stephen M Walls, Lecturer  
Department of Marketing  
PhD, University of Texas at Austin, 2009

William J Way, Lecturer  
Department of Finance  
MBA, University of Texas at Austin, 1989

Francis S Webster, Lecturer  
Department of Information, Risk, and Operations Management  
MEE, Rice University, 1968

Andrew B Whinston, Professor  
Hugh Roy Cullen Centennial Chair in Business Administration  
Department of Information, Risk, and Operations Management  
PhD, Carnegie Mellon University, 1962

Jennifer Whitson, Assistant Professor  
Department of Management  
PhD, Northwestern University, 2007

John K Williams, Senior Lecturer  
Department of Marketing  
MBA, University of Texas at Austin, 1994

Michael G Williamson, Associate Professor  
Department of Accounting  
PhD, Indiana University at Bloomington, 2005

Margaret A Wilson, Lecturer  
Department of Information, Risk, and Operations Management  
MPA, University of Texas at Austin, 1976

Brent L Winkelman, Lecturer  
Business, Government and Society  
MA, University of Texas at Austin, 2003

Luke A Winslow, Lecturer  
Department of Management  
PhD, University of Texas at Austin, 2009

Yanhua Yang, Assistant Professor  
Department of Accounting  
PhD, University of Colorado at Boulder, 2006

Yong Yu, Assistant Professor  
Department of Accounting  
PhD, Penn State University Park, 2006

Thaleia Zariphopoulou, Professor  
V. F. Neuhaus Centennial Professorship in Finance  
Department of Information, Risk, and Operations Management  
PhD, Brown University, 1989

Ying Zhang, Assistant Professor  
Department of Marketing  
PhD, University of Chicago, 2007

Kristina Zvinakis, Lecturer  
Department of Accounting  
PhD, University of Texas at Austin, 1998

## College of Communication Faculty

Miguel A Alvarez, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2009

Rosental C Alves, Professor  
Knight Chair in Journalism  
School of Journalism  
BA, Universidade Federal do Rio de Janeiro, 1976

Henry A Anderson, Associate Professor Emeritus  
School of Journalism

PhD, University of Texas at Austin, 1975

Ronald B Anderson, Associate Professor  
Department of Advertising  
PhD, Michigan State University, East Lansing, 1988

Lucinda Jane Atkinson, Assistant Professor  
Department of Advertising  
PhD, University of Wisconsin-Madison, 2009

Joan M Balash, Specialist  
Department of Communication Sciences and Disorders  
MA, University of Texas at Austin, 1987

Dawna Ballard, Associate Professor  
Department of Communication Studies  
PhD, University of California-Santa Barbara, 2002

Micah Robert Barber, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2011

Benjamin L Bays, Lecturer  
Department of Radio-Television-Film  
BA, University of Texas at Austin, 1998

Lisa M Bedore, Professor  
Department of Communication Sciences and Disorders  
PhD, Purdue University Main Campus, 1998

Ann E Beeson, Senior Lecturer  
School of Journalism  
JD, Emory University, 1993

Tamara A Bell, Lecturer  
Department of Advertising  
PhD, University of Texas at Austin, 2004

Mary C Beltran, Assistant Professor  
Department of Radio-Television-Film  
PhD, University of Texas at Austin, 2002

Charles E Berg, Professor  
Joe M. Dealey, Sr. Professorship in Media Studies  
Department of Radio-Television-Film  
PhD, University of Texas at Austin, 1987

Brenda L Berkelaar Van Pelt, Assistant Professor  
Department of Communication Studies  
PhD, Purdue University Main Campus, 2010

Mark E Bernstein, Associate Professor  
Department of Communication Sciences and Disorders  
EdD, Boston University, 1980

John P Blood, Senior Lecturer  
Department of Radio-Television-Film  
MArch, Yale University, 1987

Robert D Brooks, Professor Emeritus  
Department of Radio-Television-Film  
PhD, University of Wisconsin-Madison, 1968

Alisha R Brophy, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2009

Larry D Browning, Professor

Department of Communication Studies  
PhD, Ohio State U Main Campus, 1973

Barry Brummett, Professor  
Charles Sapp Centennial Professorship in Communication  
Department of Communication Studies  
PhD, University of Minnesota-Twin Cities, 1978

Jennifer S Brundidge, Assistant Professor  
Department of Radio-Television-Film  
PhD, University of California-Santa Cruz, 2008

James Martin Bunting, Lecturer  
Department of Advertising  
BS, University of Texas at Austin, 1985

Gene A Burd, Associate Professor  
School of Journalism  
PhD, Northwestern University, 1964

Neal M Burns, Professor  
Department of Advertising  
PhD, McGill University, 1959

Courtney T Byrd, Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, Vanderbilt University, 2003

Kat Candler, Lecturer  
Department of Radio-Television-Film  
BA, Florida State University, 1996

Brett R Caraway, Lecturer  
Department of Radio-Television-Film  
PhD, University of Texas at Austin, 2011

Angela A Carey, Clinical Assistant Professor  
Department of Communication Sciences and Disorders  
AuD, Pennsylvania College of Optometry, 2009

Wanda Garner Cash, Clinical Professor  
School of Journalism  
BJ, University of Texas at Austin, 1975

Craig A Champlin, Professor  
Lillie Hage Jamail Centennial Professorship  
Department of Communication Sciences and Disorders  
PhD, University of Kansas Main Campus, 1987

Bharath Chandrasekaran, Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, Purdue University Main Campus, 2008

Wenhong Chen, Assistant Professor  
Department of Radio-Television-Film  
PhD, University of Toronto, 2007

George Edward Cheney, Adjunct Professor  
Department of Communication Studies  
PhD, Purdue University Main Campus, 1985

Richard A Cherwitz, Professor  
Department of Communication Studies  
PhD, University of Iowa, 1978

Sejung M Choi, Associate Professor  
Department of Advertising

PhD, Michigan State University, East Lansing, 2002

Hsiang Chyi, Assistant Professor  
School of Journalism  
PhD, University of Texas at Austin, 1999

Vincent Joseph Cicchirillo, Assistant Professor  
Department of Advertising  
PhD, The Ohio State University Main Campus, 2009

Angeline Grace Close, Assistant Professor  
Department of Advertising  
PhD, University of Georgia, 2006

Dana L Cloud, Associate Professor  
Department of Communication Studies  
PhD, University of Iowa, 1992

Renita Beth Coleman, Associate Professor  
School of Journalism  
PhD, University of Missouri - Columbia, 2001

James B Colson, Professor Emeritus  
School of Journalism  
MA, University of California-Los Angeles, 1961

Martin R Cox, Senior Lecturer  
Department of Communication Studies  
MA, University of Texas at Austin, 1994

Michael John Cramer, Senior Lecturer  
Department of Advertising  
JD, Marquette University, 1978

Isabella C Cunningham, Professor  
Ernest A. Sharpe Centennial Professorship in Communication  
Department of Advertising  
PhD, Michigan State University, East Lansing, 1972

Tracy S Dahlby, Professor  
Frank A. Bennack, Jr. Chair in Journalism  
School of Journalism  
AM, Harvard University, 1976

Rene M Dailey, Associate Professor  
Department of Communication Studies  
PhD, University of California-Santa Barbara, 2005

Rodger M Dalston, Professor Emeritus  
Department of Communication Sciences and Disorders  
PhD, Northwestern University, 1972

John A Daly, Professor  
Texas Commerce Bancshares, Inc. Centennial Professorship  
in Business Communication, Frank A. Liddell, Sr. Centennial  
Professorship in Communication  
Department of Communication Studies  
PhD, Purdue University Main Campus, 1977

Wayne A Danielson, Professor Emeritus  
School of Journalism  
PhD, Stanford University, 1957

Dennis C Darling, Professor  
School of Journalism  
MFA, School of the Art Institute of Chicago, 1973

Barbara L Davis, Professor



Houston Harte Centennial Professorship in Communication  
Department of Communication Sciences and Disorders  
PhD, University of Texas at Austin, 1986

D D Davis, Associate Professor  
Department of Communication Studies  
PhD, University of Texas at Arlington, 1995

Katherine Winkler Dawson, Senior Lecturer  
School of Journalism  
MS, Columbia University in the City of New York, 2003

Donna De Cesare, Associate Professor  
School of Journalism  
MPhil, University of Essex, 1979

Mercedes L De Uriarte, Associate Professor Emeritus  
School of Journalism  
School of Journalism  
PhD, Yale University, 1996

Lisa Z Dobias, Senior Lecturer  
Department of Advertising  
BSAdv, University of Texas at Austin, 1989

David H Donaldson, Lecturer  
School of Journalism  
JD, University of Texas at Austin, 1976

Erin Eileen Donovan-Kicken, Assistant Professor  
Department of Communication Studies  
PhD, University of Illinois at Urbana-Champaign, 2008

Minette E Drumwright, Associate Professor  
Department of Advertising  
PhD, University of North Carolina at Chapel Hill, 1986

Anthony David Dudo, Assistant Professor  
Department of Advertising  
PhD, University of Wisconsin-Madison, 2011

Tracy N Duncan, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2008

Matthew S Eastin, Associate Professor  
Department of Advertising  
PhD, Michigan State University, East Lansing, 2001

Soriya H Estes, Lecturer  
Department of Communication Sciences and Disorders  
MA, University of Texas at Austin, 1999

James Andrew Fino, Lecturer  
Department of Radio-Television-Film  
BS, University of Texas at Austin, 1988

Jessica Franco, Clinical Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, University of Texas at Austin, 2008

Glenn Charles Frankel, Professor  
G. B. Dealey Regents Professorship in Journalism  
School of Journalism  
AB, Columbia University in the City of New York, 1971

Caroline J Frick, Assistant Professor  
Department of Radio-Television-Film

PhD, University of Texas at Austin, 2005

Jennifer Fuller, Assistant Professor  
Department of Radio-Television-Film  
PhD, University of Wisconsin-Madison, 2004

Walter R Garcia-Buckalew, Lecturer  
School of Journalism  
MA, University of Texas at Austin, 1993

David E Garlock, Senior Lecturer  
School of Journalism  
BS, University of Maryland College Park, 1973

Andrew S Garrison, Associate Professor  
Department of Radio-Television-Film  
BA, Antioch University, 1974

Todd Andrew Gibson, Lecturer  
Department of Communication Sciences and Disorders  
PhD, The University of Memphis, 2010

Homero Gil de Zuniga, Assistant Professor  
School of Journalism  
PhD, University of Wisconsin-Madison, 2005

Ronald B Gillam, Adjunct Professor  
Department of Communication Sciences and Disorders  
PhD, Indiana University at Bloomington, 1989

Lalitha Gopalan, Associate Professor  
Department of Radio-Television-Film  
PhD, University of Rochester, 1993

Dena H Granof, Senior Lecturer  
Department of Communication Sciences and Disorders  
PhD, University of Texas at Austin, 1982

Paul H Gray, Professor Emeritus  
Department of Communication Studies  
PhD, Louisiana State University and Agricultural and Mechanical  
College, 1966

Zenzi Margareta Griffin, Professor  
Department of Communication Sciences and Disorders  
PhD, University of Illinois at Urbana-Champaign, 1998

Sandra J Guardado, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 1995

Joshua G Gunn, Associate Professor  
Department of Communication Studies  
PhD, University of Minnesota-Twin Cities, 2002

Elizabeth H Hampton, Lecturer  
Department of Communication Sciences and Disorders  
MA, University of Texas at Austin, 2002

Sharon Jarvis Hardesty, Associate Professor  
Department of Communication Studies  
PhD, University of Texas at Austin, 2000

David K Harmon, Lecturer  
School of Journalism  
BJ, University of Texas at Austin, 1991

Johnnie F Harris, Lecturer

Department of Advertising  
MA, University of Texas at Austin, 1991

Roderick P Hart, Professor  
Allan Shivers Centennial Chair in Communication, Walter Cronkite  
Regents Chair in Communication  
Department of Communication Studies  
PhD, Pennsylvania State University Park, 1970

Melanie Hauser, Lecturer  
School of Journalism  
BA, University of Texas at Austin, 1975

Terry Hemeyer, Senior Lecturer  
Department of Advertising  
MA, University of Denver, 1970

Geraldine R Henderson, Adjunct Associate Professor  
Department of Advertising  
PhD, Northwestern University, 1995

Justin Hennard, Lecturer  
Department of Radio-Television-Film

Burnes Patrick Hollyman, Lecturer  
Department of Radio-Television-Film  
MA, University of Texas at Austin, 1977

Donald W Howard, Associate Professor  
Department of Radio-Television-Film  
MA, University of Texas at Austin, 1988

Nicolas James Hundley, Lecturer  
Department of Advertising  
MFA, University of Massachusetts, 2004

Jeff R Hunt, Adjunct Assistant Professor  
Department of Advertising  
BJ, University of Texas at Austin, 1984

Steve R Jennings, Lecturer  
Department of Radio-Television-Film  
MFA, Stephen F Austin State University, 1992

Robert W Jensen, Professor  
School of Journalism  
PhD, University of Minnesota-Twin Cities, 1992

Su-Hyun Jin, Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, University of Minnesota-Twin Cities, 2003

Thomas Jerrold Johnson, Professor  
Amon G. Carter, Jr. Centennial Professorship in Communication  
School of Journalism  
PhD, University of Washington - Seattle, 1989

David S Junker, Lecturer  
Department of Advertising  
PhD, University of Wisconsin-Madison, 2004

Lee Ann Kahlor, Associate Professor  
Department of Advertising  
PhD, University of Wisconsin-Madison, 2003

Mary C Kearney, Associate Professor  
Department of Radio-Television-Film  
PhD, University of South Carolina - Lancaster, 1998

Stuart David Kelban, Associate Professor  
Department of Radio-Television-Film  
MFA, University of Virginia, 1989

Diana Kerew-Shaw, Lecturer  
Department of Radio-Television-Film  
BFA, Boston University, 1964

Gene H Kincaid, Senior Lecturer  
Department of Advertising  
MA, University of Texas at Austin, 1983

Mark L Knapp, Professor Emeritus  
Department of Communication Studies  
PhD, Pennsylvania State University Main Campus, 1966

Dan W Knight, Lecturer  
Department of Radio-Television-Film  
MA, Southern Methodist University, 1998

Karen J Kocher, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 1995

William E Korbus, Professor Emeritus  
School of Journalism  
MS, University of Illinois at Urbana-Champaign, 1974

Shanti Kumar, Associate Professor  
Department of Radio-Television-Film  
PhD, Indiana University at Bloomington, 1987

Dominic L Lasorsa, Associate Professor  
School of Journalism  
PhD, Stanford University, 1986

Regina G Lawrence, Professor  
Jesse H. Jones Centennial Chair in Communication  
School of Journalism  
PhD, University of Washington - Seattle, 1997

John D Leckenby, Professor Emeritus  
Department of Advertising  
PhD, University of Illinois at Urbana-Champaign, 1974

Wei-Na Lee, Professor  
Department of Advertising  
PhD, University of Illinois at Urbana-Champaign, 1988

Anne Lewis, Senior Lecturer  
Department of Radio-Television-Film  
BFA, School of Visual Arts, 2001

Deborah E Lewis, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 1995

Richard M Lewis, Associate Professor  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 1994

Chang Liu, Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, Indiana University at Bloomington, 2002

Mark G Longaker, Associate Professor

Department of Communication Studies  
PhD, Pennsylvania State University Main Campus, 2003

Bradford Rodney Love, Assistant Professor  
Department of Advertising  
PhD, Michigan State University, East Lansing, 2007

Joel Lulla, Lecturer  
Department of Advertising  
JD, University of North Carolina at Chapel Hill, 1982

Michael S Mackert, Assistant Professor  
Department of Advertising  
PhD, Michigan State University, East Lansing, 2006

Madhavi Mallapragada, Assistant Professor  
Department of Radio-Television-Film  
PhD, University of Wisconsin-Madison, 2003

Thomas P Marquardt, Professor  
Ben F. Love Regents Professorship in Communication  
Department of Communication Sciences and Disorders  
PhD, University of Washington - Seattle, 1973

Geoffrey C Marslett, Senior Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2000

Frederick N Martin, Professor Emeritus  
Department of Communication Sciences and Disorders  
PhD, City University of New York Brooklyn College, 1968

Christine L Matyear, Senior Lecturer  
Department of Communication Sciences and Disorders  
PhD, University of Texas at Austin, 1997

Madeline M Maxwell, Professor  
Department of Communication Studies  
PhD, University of Arizona, 1980

Erin E Mayes, Lecturer  
School of Journalism  
BJ, University of Texas at Austin, 1990

Diana D McCarthy, Lecturer  
School of Journalism  
BJ, University of Missouri - Columbia, 1980

Maxwell E McCombs, Professor Emeritus  
School of Journalism  
School of Journalism  
PhD, Stanford University, 1966

Cynthia Ann McCreery, Assistant Professor  
Department of Radio-Television-Film  
BA, University of California-Santa Barbara, 2000

Matthew S McGlone, Associate Professor  
Department of Communication Studies  
PhD, Princeton University, 1994

Susan E McLeland, Lecturer  
Department of Communication Studies  
School of Journalism  
Department of Radio-Television-Film  
PhD, University of Texas at Austin, 1996

Cydney M Medford, Lecturer

Department of Communication Sciences and Disorders  
MS, Baylor University, 1980

Stephen J Mims, Lecturer  
Department of Radio-Television-Film  
MA, University of Texas at Austin, 1987

William D Minutaglio, Clinical Professor  
School of Journalism  
MS, Columbia University in the City of New York, 1978

Mark Morrison, Lecturer  
School of Journalism  
BJ, University of Texas at Austin, 1970

John H Murphy, Professor  
Joe C. Thompson Centennial Professorship in Advertising  
Department of Advertising  
PhD, University of Texas at Austin, 1974

Roland L Myers, Lecturer  
Department of Radio-Television-Film  
BFA, University of Texas at Austin, 1999

Joe W Neal, Professor Emeritus  
Department of Communication Studies  
PhD, University of Texas at Austin, 1957

Philip Paul Nemy, Lecturer  
Department of Radio-Television-Film  
BFA, Carnegie Mellon University, 1983

Mary Anne Nericcio, Clinical Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, University of Texas at Austin, 1994

Sheldon J Pacotti, Lecturer  
Department of Radio-Television-Film  
AB, Harvard University, 1993

Richard Parks, Lecturer  
Department of Radio-Television-Film  
BFA, Carnegie Mellon University, 1980

Elizabeth D Pena, Professor  
Department of Communication Sciences and Disorders  
PhD, Temple University, 1993

Jorge F Pena, Assistant Professor  
Department of Communication Studies  
PhD, Cornell University, 2007

Bruce W Pennycook, Professor  
Department of Radio-Television-Film  
DMA, Stanford University, 1978

Anita M Perez, Lecturer  
Department of Communication Sciences and Disorders  
PhD, University of Texas at Austin, 1998

John D Pierson, Lecturer  
Department of Radio-Television-Film  
BA, New York University, 1977

Sally Kay Planalp, Adjunct Professor  
Department of Communication Studies  
PhD, University of Wisconsin-Madison, 1983

Paula M Poindexter, Associate Professor  
School of Journalism  
PhD, Syracuse University Main Campus, 1980

Stephen J Pont, Adjunct Assistant Professor  
Department of Advertising  
MD, University of Texas Southwestern Medical Center at Dallas, 2002

Charles P Quarterman, Lecturer  
School of Journalism  
MA, University of Texas at Austin, 2006

Robert James Quigley, Senior Lecturer  
School of Journalism  
BA, Stephen F Austin State University, 1996

Edward Akira Radtke, Assistant Professor  
Department of Radio-Television-Film  
BFA, New York University, 1985

Paul J Raval, Assistant Professor  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2004

Ellis Clifford Reed, Clinical Professor  
School of Journalism  
AA, Newark School of Fine and Industrial Art, 1969

Stephen D Reese, Professor  
Jesse H. Jones Professorship in Journalism  
School of Journalism  
PhD, University of Wisconsin-Madison, 1982

Gabriel Reyes benavides, Lecturer  
Department of Advertising  
BFA, University of Texas at Austin, 1980

Maria del Pilar Rivera, Lecturer  
Department of Advertising  
MA, University of Texas at Austin, 1999

America B Rodriguez, Associate Professor  
Department of Radio-Television-Film  
School of Journalism  
PhD, University of California-San Diego, 1993

Maggie R Rodriguez, Associate Professor  
School of Journalism  
PhD, University of North Carolina at Chapel Hill, 1998

Christopher Charles Roldan, Lecturer  
Department of Radio-Television-Film  
BS, University of Texas at Austin, 2002

Joel D Rollins, Senior Lecturer  
Department of Communication Studies  
PhD, University of North Texas, 1996

James R Romero, Lecturer  
Department of Advertising  
MA, University of Texas at Austin, 2004

Joshunda V Sanders, Lecturer  
School of Journalism  
MS, University of Texas at Austin, 2009

Jorge Sanhueza-Lyon, Lecturer  
School of Journalism

BA, University of Texas at Austin, 2001

Brian M Satterwhite, Lecturer  
Department of Radio-Television-Film  
BM, Berklee College of Music, 1997

Thomas G Schatz, Professor  
Mrs. Mary Gibbs Jones Centennial Chair in Communication  
Department of Radio-Television-Film  
PhD, University of Iowa, 1976

Nancy Schiesari, Professor  
Department of Radio-Television-Film  
MA, Royal College of Art, 1978

Kelley Shannon, Lecturer  
School of Journalism  
BJ, University of Texas at Austin, 1985

Andrew B Shea, Associate Professor  
Department of Radio-Television-Film  
MA, California Institute of the Arts, 1985

Li Sheng, Assistant Professor  
Department of Communication Sciences and Disorders  
PhD, Northwestern University, 2007

William S Smith, Lecturer  
Department of Advertising  
BS, Northwestern University, 1963

Ellen R Spiro, Professor  
Department of Radio-Television-Film  
MA, State University of New York at Buffalo, 1991

Valerie J Stahl, Lecturer  
Department of Communication Sciences and Disorders  
ScD, Boston University, 1990

Janet Staiger, Professor  
William P. Hobby Centennial Professorship in Communication  
Department of Radio-Television-Film  
PhD, University of Wisconsin-Madison, 1981

Liza E Stavchansky de lewis, Lecturer  
Department of Advertising  
PhD, University of Texas at Austin, 2000

Laura L Stein, Associate Professor  
Department of Radio-Television-Film  
PhD, University of Texas at Austin, 1997

Paul J Stekler, Professor  
Wofford Denius Chair in Entertainment Studies  
Department of Radio-Television-Film  
PhD, Harvard University, 1983

Keri K Stephens, Assistant Professor  
Department of Communication Studies  
PhD, University of Texas at Austin, 2005

Allucquere R Stone, Associate Professor Emeritus  
Department of Radio-Television-Film  
PhD, University of California-Santa Cruz, 1993

Patricia A Stout, Professor  
John P. McGovern Regents Professorship in Health and Medical  
Science Communication



Department of Advertising  
PhD, University of Illinois at Urbana-Champaign, 1985

Joseph Straubhaar, Professor  
Amon G. Carter Centennial Professorship in Communication  
Department of Radio-Television-Film  
PhD, Tufts University, 1981

Jurgen K Streeck, Associate Professor  
Department of Communication Studies  
PhD, Free University of Berlin, 1981

Natalie J Stroud, Assistant Professor  
Department of Communication Studies  
PhD, University of Pennsylvania, 2006

Scott R Stroud, Assistant Professor  
Department of Communication Studies  
PhD, Temple University, 2006

Sharon L Strover, Professor  
Philip G. Warner Regents Professorship in Communication  
Department of Radio-Television-Film  
PhD, Stanford University, 1982

Daniel H Stuyck, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2010

Yongjun Sung, Assistant Professor  
Department of Advertising  
PhD, University of Georgia, 2006

Harvey M Sussman, Professor  
R. P. Doherty, Sr. Centennial Professorship in Communication  
Department of Communication Sciences and Disorders  
PhD, University of Wisconsin-Madison, 1970

Joel L Swerdlow, Adjunct Professor  
Department of Communication Studies  
PhD, Cornell University, 1974

George Sylvie, Associate Professor  
School of Journalism  
PhD, University of Texas at Austin, 1988

Kevin D Thomas, Assistant Professor  
Department of Advertising  
PhD, University of Texas at Austin, 2011

Sean R Thompson, Lecturer  
Department of Advertising  
MA, University of Texas at Austin, 1998

Beau M Thorne, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2006

Russell G Todd, Professor  
School of Journalism  
PhD, Stanford University, 1982

Jeffrey K Tulis, Associate Professor  
Department of Communication Studies  
PhD, University of Chicago, 1982

Kathleen Raye Tyner, Associate Professor  
Department of Radio-Television-Film

MA, San Francisco State University, 1986

Suzanne Valentine Henny Van der feest, Lecturer  
Department of Communication Sciences and Disorders  
PhD, Radboud Universiteit Nijmegen, 2007

Anita L Vangelisti, Professor  
Jesse H. Jones Centennial Professorship in Communication  
Department of Communication Studies  
PhD, University of Texas at Austin, 1989

Jeffrey Walker, Professor  
Department of Communication Studies  
PhD, University of California-Berkeley, 1985

Samuel C Watkins, Associate Professor  
Department of Radio-Television-Film  
PhD, University of Michigan-Ann Arbor, 1994

Jeffrey R Weber, Lecturer  
Department of Radio-Television-Film  
JD, Southwestern University School of Law, 1976

John T Wells, Lecturer  
Department of Advertising  
JD, University of Texas at Austin, 1974

Michael R Whitney, Lecturer  
School of Journalism  
MSJ, Northwestern University, 1967

Gary B Wilcox, Professor  
John A. Beck Centennial Professorship in Communication  
Department of Advertising  
PhD, Michigan State University, East Lansing, 1982

Karin G Wilkins, Professor  
Department of Radio-Television-Film  
PhD, University of Pennsylvania, 1991

Thomas Willett, Lecturer  
Department of Radio-Television-Film  
MA, University of Texas at Austin, 1999

Jerome D Williams, Adjunct Professor  
F. J. Heyne Centennial Professorship in Communication  
Department of Advertising  
PhD, University of Colorado at Boulder, 1986

Carroll P Wilson, Lecturer  
School of Journalism  
MA, West Texas A&M University, 1980

Kristopher Wilson, Senior Lecturer  
School of Journalism  
PhD, University of Colorado at Boulder, 1993

Andrew Peter Xanthopoulos, Lecturer  
Department of Radio-Television-Film  
MFA, University of Texas at Austin, 2011

Matthew H Young, Lecturer  
Department of Radio-Television-Film  
Diploma (Artist), Vancouver Film School, 2000

Diane M Zander, Lecturer  
Department of Radio-Television-Film

MFA, University of Texas at Austin, 2002

Amanda Zappler, Lecturer  
Department of Communication Sciences and Disorders  
AuD, A T Still University of Health Sciences, School of Health  
Sciences, 2006

## College of Education Faculty

Lawrence D Abraham, Professor  
Department of Kinesiology and Health Education  
EdD, Teachers College, Columbia University, 1975

Jennifer Keys Adair, Assistant Professor  
Department of Curriculum and Instruction  
PhD, Arizona State University Main, 2009

Ricardo C Ainslie, Professor  
Department of Educational Psychology  
PhD, University of Michigan-Ann Arbor, 1979

Funsho M Akingbala, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1978

Steven R Aleman, Lecturer  
Department of Special Education  
JD, George Washington University, 1996

Douglas G Allen, Associate Professor  
Department of Educational Psychology  
PhD, San Diego State University, 2000

Cassandre G Alvarado, Lecturer  
Department of Educational Administration  
PhD, University of Texas at Austin, 2004

Margarita M Arellano, Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1987

Robin D Atwood, Research Assistant Professor (Affiliated)  
Department of Kinesiology and Health Education  
EdD, University of Texas at Austin, 1999

Germine H Awad, Assistant Professor  
Department of Educational Psychology  
PhD, Southern Illinois University Carbondale, 2005

Natalie C Barraga, Professor Emeritus  
Department of Special Education  
PHD-EDD, George Peabody C Teachers, 1963

John Bartholomew, Professor  
Department of Kinesiology and Health Education  
PhD, Arizona State University Main, 1996

James P Barufaldi, Professor  
Ruben E. Hinojosa Regents Professorship in Education  
Department of Curriculum and Instruction  
PhD, University of Maryland College Park, 1972

Debra E Bay-Borelli, Clinical Assistant Professor  
Department of Curriculum and Instruction

PhD, University of Texas at Austin, 2011

Kimberly A Beckwith, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 2006

Mario A Benitez, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, Claremont Graduate University, 1967

Keisha L Bentley-Edwards, Assistant Professor  
Department of Educational Psychology  
PhD, University of Pennsylvania, 2009

Susan N Beretvas, Associate Professor  
Department of Educational Psychology  
PhD, University of Washington - Seattle, 2000

Leema G Berland, Assistant Professor  
Department of Curriculum and Instruction  
PhD, Northwestern University, 2008

Edgar W Bessent, Professor Emeritus  
Department of Educational Administration  
PhD, University of Texas at Austin, 1961

George M Blanco, Associate Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1971

Whitney G Blankenship, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2010

Katherine Bomer, Lecturer  
Department of Curriculum and Instruction  
MA, Teachers College, Columbia University, 1990

Randy Bomer, Associate Professor  
Department of Curriculum and Instruction  
PhD, Teachers College, Columbia University, 1996

John G Bordie, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1958

Gary D Borich, Professor  
Department of Educational Psychology  
EdD, Indiana University at Bloomington, 1970

Matthew Bowers, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 2011

Gene I Brooks, Lecturer  
Department of Special Education  
PhD, University of Texas at Austin, 2000

Robert Matthew Brothers, Assistant Professor  
Department of Kinesiology and Health Education  
PhD, University of North Texas, 2007

Anthony L Brown, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Wisconsin-Madison, 2006

Christopher P Brown, Associate Professor  
Department of Curriculum and Instruction

PhD, University of Wisconsin-Madison, 2004

Keffrelyn D Brown, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Wisconsin-Madison, 2006

Chris B Brownson, Clinical Associate Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2001

Lawrence A Brownstein, Senior Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1977

Brian R Bryant, Research Professor (Affiliated)  
Department of Special Education  
PhD, University of Texas at Austin, 1984

Diane P Bryant, Professor  
Department of Special Education  
PhD, University of New Mexico Main Campus, 1986

Pamela S Buchanan, Lecturer  
Department of Kinesiology and Health Education  
MA, Sam Houston State University, 1988

Brenda G Bush, Lecturer  
Department of Special Education  
MEd, University of Texas at Austin, 2001

Jesse J Butler, Adjunct Professor  
Department of Educational Administration  
EdD, Oklahoma State University Main Campus, 1983

Ralph W Cain, Associate Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1964

Rebecca Marie Callahan, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of California-Davis, 2003

Jessica Duncan Cance, Assistant Professor  
Department of Kinesiology and Health Education  
PhD, University of North Carolina at Chapel Hill, 2010

Norma V Cantu, Professor  
Ken McIntyre Professorship for Excellence in School Leadership  
Department of Educational Administration  
JD, Harvard University, 1977

V R Cardozier, Professor Emeritus  
Department of Educational Administration  
PhD, Ohio State U Main Campus, 1952

Cindy I Carlson, Professor  
Margie Gurley Seay Centennial Professorship in Education  
Department of Educational Psychology  
PhD, Indiana University at Bloomington, 1982

Guadalupe D Carmona-Dominguez, Assistant Professor  
Department of Curriculum and Instruction  
PhD, Purdue University Main Campus, 2004

Laroy R Carry, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, Stanford University, 1968

Heather L Carter, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Maryland College Park, 1969

Jennifer L Carter, Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2004

Darla Marie Castelli, Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of South Carolina - Columbia, 2002

Stephanie Washbourn Cawthon, Assistant Professor  
Department of Educational Psychology  
PhD, University of Wisconsin-Madison, 2000

Laurence H Chalip, Professor  
Department of Kinesiology and Health Education  
PhD, University of Chicago, 1988

Stephen Paul Ciullo, Lecturer  
Department of Special Education  
PhD, University of Texas at Austin, 2011

Kevin O Cokley, Associate Professor  
Department of Educational Psychology  
PhD, Georgia State University, 1998

Denise Collier, Adjunct Professor  
Department of Educational Administration  
EdD, University of Texas at Austin, 2001

Nelson W Coulter, Adjunct Assistant Professor  
Department of Educational Administration  
EdD, Texas Tech University, 2006

Edward F Coyle, Professor  
Department of Kinesiology and Health Education  
PhD, University of Arizona, 1979

Charles W Craven, Associate Professor Emeritus  
Department of Kinesiology and Health Education  
MEd, University of Texas at Austin, 1968

Sheri L Crossett, Lecturer  
Department of Curriculum and Instruction  
MEd, Texas State University-San Marcos, 2003

Don S Crowley, Specialist  
Department of Kinesiology and Health Education  
BS, University of Texas at Austin, 1990

Nancy P Daley, Adjunct Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1991

Ozro L Davis, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, Vanderbilt University, 1958

Noah De Lissovoy, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of California-Los Angeles, 2005

Rosario C Deleon, Clinical Assistant Professor  
Department of Educational Psychology  
PhD, University of Houston, 2005

Cesar Delgado, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Michigan-Ann Arbor, 2009

Mark David Dietz, Lecturer  
Department of Educational Administration  
PhD, University of Texas at Austin, 2008

Jonathan B Dingwell, Associate Professor  
Department of Kinesiology and Health Education  
PhD, Pennsylvania State University Main Campus, 1998

Marlene A Dixon, Associate Professor  
Department of Kinesiology and Health Education  
PhD, Ohio State U Main Campus, 2002

Barbara G Dodd, Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1984

Pamela S Dougherty, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of North Texas, 1997

David J Drum, Professor  
Department of Educational Psychology  
PhD, American University, 1969

Susan K Dubois, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
MD, University of Texas Health Science Center at Houston, 1988

Cynthia H Edwards, Lecturer  
Department of Special Education  
MEd, University of Texas at Austin, 2007

Bonnie M Elliott, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1999

Edmund T Emmer, Professor  
Department of Educational Psychology  
Department of Educational Psychology  
PhD, University of Michigan-Ann Arbor, 1967

Susan B Empson, Associate Professor  
Department of Curriculum and Instruction  
PhD, University of Wisconsin-Madison, 1994

Nolan Estes, Professor Emeritus  
Department of Educational Administration  
EdD, Harvard University, 1959

Gulielma Leonard Fager, Lecturer  
Department of Kinesiology and Health Education  
MPH, Columbia University in the City of New York, 2007

John D Fair, Adjunct Professor  
Department of Kinesiology and Health Education  
PhD, Duke University, 1970

Toni L Falbo, Professor  
Department of Educational Psychology  
PhD, University of California-Los Angeles, 1973

Terry S Falcomata, Assistant Professor  
Department of Special Education

PhD, University of Iowa, 2008

Brian K Farr, Lecturer  
Department of Kinesiology and Health Education  
MA, Ohio State U Main Campus, 1996

Roger P Farrar, Professor  
Department of Kinesiology and Health Education  
PhD, University of Massachusetts, 1976

Edmund J Farrell, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of California-Berkeley, 1969

Sherry L Field, Professor  
Catherine Mae Parker Centennial Professorship in Education  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1991

Andrea Lynn Flower, Assistant Professor  
Department of Special Education  
PhD, University of Washington - Seattle, 2008

Douglas E Foley, Professor  
Department of Curriculum and Instruction  
PhD, Stanford University, 1970

Kevin M Foster, Assistant Professor  
Department of Educational Administration  
PhD, University of Texas at Austin, 2001

Maria E Franquiz, Professor  
Department of Curriculum and Instruction  
PhD, University of California-Santa Barbara, 1995

Joe L Frost, Professor Emeritus  
Department of Curriculum and Instruction  
EdD, University of Arkansas Main Campus, 1965

Lynda E Frost, Clinical Associate Professor  
Department of Educational Administration  
PhD, University of Iowa, 1996

Anne L Fuller, Clinical Associate Professor  
Department of Special Education  
PhD, University of Texas at Austin, 1992

Shernaz B Garcia, Associate Professor  
Department of Special Education  
PhD, University of Texas at Austin, 1984

David W Gardner, Adjunct Professor  
Department of Educational Administration  
PhD, Texas A & M University, 1979

Douglas C Garrard, Lecturer  
Department of Educational Administration  
EdD, University of Texas at Austin, 2006

Elizabeth P Garza, Adjunct Professor  
Department of Educational Administration  
PhD, University of Texas at Austin, 2001

Gretchen Generett, Adjunct Associate Professor  
Department of Educational Administration  
PhD, University of North Carolina at Chapel Hill,

Mary C Gerwels, Senior Lecturer



Department of Educational Psychology  
PhD, University of Texas at Austin, 1994

Barbara H Gideon, Lecturer  
Department of Educational Administration  
EdD, Texas A & M University, 2000

Lucia A Gilbert, Professor Emeritus  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1974

Juan C Gonzalez, Senior Lecturer  
Department of Educational Administration  
PhD, University of Illinois at Urbana-Champaign, 1981

Mark Anthony Gooden, Associate Professor  
Department of Educational Administration  
PhD, The Ohio State University Main Campus, 2001

Nell H Gottlieb, Research Professor (Affiliated)  
Department of Kinesiology and Health Education  
PhD, Boston University, 1981

Jane S Gray, Clinical Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2006

B C Green, Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of Maryland College Park, 1996

Emily Strassner Greenspahn, Clinical Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2006

Lisa Griffin, Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of Western Ontario, 1999

Julia Ann Guinn, Specialist  
Department of Kinesiology and Health Education  
MS, Baylor University, 2006

Frank J Guszak, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Wisconsin-Madison, 1966

Michele R Guzman, Clinical Associate Professor  
Department of Educational Psychology  
PhD, State University of New York at Albany, 2000

Sheila Bernal Guzman, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2006

Dorothy R Hall, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2009

Sandra E Hansmann, Lecturer  
Department of Special Education  
PhD, University of Texas at Austin, 2000

William R Harmer, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Minnesota-Twin Cities, 1959

Benjamin M Harris, Professor Emeritus

Department of Educational Administration  
PhD, University of California-Berkeley, 1958

Karol K Harris, Research Assistant Professor (Affiliated)  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 2000

Louis Harrison, Professor  
Department of Curriculum and Instruction  
PhD, Louisiana State University and Agricultural and Mechanical  
College, 1997

Brent E Hasty, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2007

Robert N Haugen, Lecturer  
Department of Kinesiology and Health Education  
MS, Utah State University, 1982

Bob Heere, Assistant Professor  
Department of Kinesiology and Health Education  
PhD, Florida State University, 2005

Julian V Heilig, Assistant Professor  
Department of Educational Administration  
PhD, Stanford University, 2006

Latoya C Hill, Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2006

Meredith L Hodgkinson, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 2007

James V Hoffman, Professor  
Department of Curriculum and Instruction  
PhD, University of Missouri - Kansas City, 1977

Carole K Holahan, Professor  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 1976

Jennifer J Holme, Assistant Professor  
Department of Educational Administration  
PhD, University of California-Los Angeles, 2000

Amy J Hornby Uribe, Clinical Assistant Professor  
Department of Curriculum and Instruction  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2010

Elaine K Horwitz, Professor  
Department of Curriculum and Instruction  
PhD, University of Illinois at Urbana-Champaign, 1980

Philip P Huang, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
MD, University of Texas Southwestern Medical Center at Dallas, 1986

Joan Hughes, Associate Professor  
Department of Curriculum and Instruction  
PhD, Michigan State University, East Lansing, 2000

Thomas M Hunt, Assistant Professor  
Department of Kinesiology and Health Education

PhD, University of Texas at Austin, 2007

Michael G Hydak, Specialist  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1977

John L Ivy, Professor  
Teresa Lozano Long Endowed Chair in Kinesiology and Health Education  
Department of Kinesiology and Health Education  
PhD, University of Maryland College Park, 1976

Earl Jennings, Professor Emeritus  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1963

Jody Jensen, Professor  
Department of Kinesiology and Health Education  
PhD, University of Maryland College Park, 1989

Julie M Jensen, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Minnesota-Twin Cities, 1970

Melody A Johnson, Adjunct Professor  
Department of Educational Administration  
PhD, University of Texas at Austin, 1990

Esbelle M Jowers, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 1999

Sharon H Justice, Lecturer  
Department of Educational Administration  
PhD, Southern Illinois University Carbondale, 1974

Manuel J Justiz, Professor  
Lee Hage Jmail Regents Chair in Education  
Department of Educational Administration  
PhD, Southern Illinois University Carbondale, 1977

Marilyn C Kameen, Professor  
Oscar and Anne Mauzy Regents Professorship for Educational Research and Development  
Department of Educational Administration  
EdD, University of Virginia (Old Code), 1974

Michael Kamen, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1991

Soyeon Kang, Lecturer  
Department of Special Education  
PhD, University of Texas at Austin, 2011

Xiaofen Keating, Associate Professor  
Department of Curriculum and Instruction  
PhD, University of Illinois at Urbana-Champaign, 2000

Timothy Z Keith, Professor  
Department of Educational Psychology  
PhD, Duke University, 1982

Harrison Keller, Senior Lecturer  
Department of Educational Administration  
PhD, Georgetown University, 2002

Deborah C Kelt, Lecturer

Department of Curriculum and Instruction  
MA, University of Texas at Austin, 2008

Craig M Kemper, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
MD, University of Texas Medical Branch, 1988

John D King, Professor Emeritus  
Department of Special Education  
EdD, University of Nebraska - Lincoln, 1964

William R Koch, Professor Emeritus  
Department of Educational Psychology  
PhD, University of Missouri - Columbia, 1980

Harold Willis Kohl, Research Professor (Affiliated)  
Department of Kinesiology and Health Education  
PhD, University of Texas Health Science Center at Houston, 1993

Earl A Koile, Professor Emeritus  
Department of Educational Psychology  
EdD, Harvard University, 1953

Benjamin Kramer, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2007

Dorothy D Lambdin, Clinical Professor  
Department of Kinesiology and Health Education  
EdD, University of Massachusetts, 1992

Sherry L Langston, Lecturer  
Department of Curriculum and Instruction  
MS, Texas A & M University - Commerce, 1997

Clarena Larrotta, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2005

Lisa M Lasater, Lecturer  
Department of Educational Psychology  
PhD, Texas A & M University, 1992

William F Lasher, Professor Emeritus  
Department of Educational Administration  
PhD, University of Michigan-Ann Arbor, 1974

Malia M Lemond, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2004

Tad D Leusch, Lecturer  
Department of Kinesiology and Health Education  
MS, Michigan State University, East Lansing, 2000

Ann Sherry Levine, Clinical Associate Professor  
Department of Educational Psychology  
PhD, University of Denver, 1993

Judith W Lindfors, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1972

Amanda L Little, Assistant Professor  
Department of Special Education  
PhD, University of Kansas Main Campus, 2009

Deborah L Little, Lecturer

Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1997

Min Liu, Professor  
Department of Curriculum and Instruction  
EdD, West Virginia University, 1992

Alexandra Loukas, Associate Professor  
Department of Kinesiology and Health Education  
PhD, Michigan State University, East Lansing, 1997

Jennifer W Maedgen, Clinical Associate Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1998

Robert M Malina, Professor Emeritus  
Department of Kinesiology and Health Education  
PhD, University of Pennsylvania, 1968

Anna E Maloch, Associate Professor  
Department of Curriculum and Instruction  
PhD, Vanderbilt University, 2000

Guy J Manaster, Professor Emeritus  
Department of Educational Psychology  
PhD, University of Chicago, 1969

Stephen T Marble, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1992

Jill A Marshall, Associate Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1984

Helen Taylor Martin, Associate Professor  
Department of Curriculum and Instruction  
PhD, Stanford University, 2003

Ramon Antonio Martinez, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of California-Los Angeles, 2009

Katherine T McCalister, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
EdD, University of Texas at Austin, 2003

Christopher J McCarthy, Professor  
Department of Educational Psychology  
PhD, Georgia State University, 1995

Danny P McCoy, Lecturer  
Department of Educational Administration  
PhD, University of Texas at Austin, 2003

Elizabeth Guillory Medina, Lecturer  
Department of Educational Psychology  
PhD, University of California-Los Angeles, 2003

Mary E Mercatoris, Specialist  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2006

Campbell Lynne Miller, Specialist  
Department of Kinesiology and Health Education  
BS, Stanford University, 2002

Terri L Mitchell, Specialist

Department of Kinesiology and Health Education  
BA, University of Houston, 1979

Leslie A Moore, Senior Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1987

Betsy Morales, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1999

Gareth Philip Morgan, Lecturer  
Department of Special Education  
PhD, Arizona State University Main, 2010

Rosemary Morrow, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1999

Richard Mowsesian, Associate Professor Emeritus  
Department of Educational Psychology  
PhD, University of Wisconsin-Madison, 1965

Gloria R Munguia, Specialist  
Department of Curriculum and Instruction  
BSSecEd, Texas A & M University - Kingsville, 1966

Sheri Mycue, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of New Orleans, 2000

William A Myers, Associate Professor  
Department of Special Education  
EdD, University of Southern California, 1969

Deborah D Nance, Lecturer  
Department of Educational Administration  
PhD, University of Texas at Austin, 1985

Kristin Neff, Associate Professor  
Department of Educational Psychology  
PhD, University of California-Berkeley, 1997

Wanda L Nelson, Lecturer  
Department of Educational Psychology  
EdD, Northern Illinois University, 1989

Glenn L Nolly, Lecturer  
Department of Educational Administration  
PhD, University of Texas at Austin, 1997

Norvell W Northcutt, Senior Lecturer  
Department of Educational Administration  
PhD, University of Texas at Austin, 1968

Nancy L Nussbaum, Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1986

Ann O'Doherty, Clinical Assistant Professor  
Department of Educational Administration  
EdD, University of Texas at Austin, 2007

Mark F O'Reilly, Professor  
Mollie Villeret Davis Professorship in Learning Disabilities  
Department of Special Education  
PhD, University of Illinois at Urbana-Champaign, 1992

Randy R Oehrlein, Lecturer  
Department of Kinesiology and Health Education  
MEd, Texas A & M University, 1990

Ruben D Olivarez, Professor  
L. D. Haskeew Centennial Professorship in Public School Administration  
Department of Educational Administration  
PhD, University of Texas at Austin, 1976

Alba A Ortiz, Professor  
Department of Special Education  
PhD, University of Texas at Austin, 1976

Martha N Ovando, Professor  
Department of Educational Administration  
PhD, University of Utah, 1981

Deborah K Palmer, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of California-Berkeley, 2004

Guy S Parcel, Adjunct Professor  
Department of Kinesiology and Health Education  
PhD, Penn State University Park, 1974

Randall M Parker, Professor  
Melissa Elizabeth Stuart Centennial Professorship in Education  
Department of Special Education  
PhD, University of Missouri - Columbia, 1970

Keryn Elizabeth Pasch, Assistant Professor  
Department of Kinesiology and Health Education  
PhD, University of Minnesota-Twin Cities, 2007

Erika Alisha Patall, Assistant Professor  
Department of Educational Psychology  
PhD, Duke University, 2009

Dimpi Patel, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
MD, Kansas City University of Medicine & Biosciences, 2004

James R Patton, Adjunct Associate Professor  
Department of Special Education  
EdD, University of Virginia (Old Code), 1980

Barbara L Pazez, Assistant Professor  
Department of Special Education  
Department of Educational Administration  
PhD, University of Texas at Austin, 1996

Bertha A Pedroza, Adjunct Professor  
Department of Educational Administration  
PhD, University of Texas at Austin, 1997

Jose Sylvester Perez, Adjunct Professor  
Department of Educational Administration  
EdD, Texas A & M University, 1995

April L Peters, Lecturer  
Department of Educational Administration  
PhD, The Ohio State University Main Campus, 2003

Fred L Peterson, Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of Illinois at Urbana-Champaign, 1981

Anthony J Petrosino, Associate Professor

Department of Curriculum and Instruction  
PhD, Vanderbilt University, 1998

Kathleen Lynn Pfannenstiel, Lecturer  
Department of Special Education  
PhD, University of Texas at Austin, 2011

Beeman N Phillips, Professor Emeritus  
Department of Educational Psychology  
EdD, Indiana University at Bloomington, 1954

Keenan A Pituch, Associate Professor  
Department of Educational Psychology  
PhD, Florida State University, 1997

Nihat Polat, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2007

Detra Price-Dennis, Assistant Professor  
Department of Curriculum and Instruction  
PhD, Ohio State U Main Campus, 2009

Kevin Prince, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Georgia, 2003

Diana Christine Pulido, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Illinois at Urbana-Champaign, 2000

Martha I Pyron, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
MD, University of Texas at San Antonio, 1996

Teresita B Ramirez, Lecturer  
Department of Kinesiology and Health Education  
MEd, University of Texas at Austin, 1981

Soncia Reagins-Lilly, Clinical Assistant Professor  
Department of Educational Administration  
EdD, University of Southern California, 1999

Richard J Reddick, Assistant Professor  
Department of Educational Administration  
EdD, Harvard University, 2007

Shanna R Reeves, Clinical Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2008

Stuart Reifel, Professor  
Department of Curriculum and Instruction  
EdD, University of California-Los Angeles, 1981

Paul E Resta, Professor  
Ruth Knight Millikan Centennial Professorship  
Department of Curriculum and Instruction  
PhD, Arizona State University Main, 1968

Pedro Reyes, Professor  
Department of Educational Administration  
PhD, University of Wisconsin-Madison, 1985

Geoff B Rich, Specialist  
Department of Kinesiology and Health Education  
MA, Southwestern Baptist Theological Seminary, 1995



John M Rich, Professor Emeritus  
Department of Curriculum and Instruction  
PhD, Ohio State U Main Campus, 1958

Frank C Richardson, Professor Emeritus  
Department of Educational Psychology  
PhD, Colorado State University, 1971

Catherine Riegler-Crumb, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Chicago, 2000

Herbert J Rieth, Professor  
Audrey Rogers Myers Centennial Professorship in Education  
Department of Special Education  
EdD, University of Kansas Main Campus, 1971

K G Ripperger-Suhler, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 2010

Donald T Rippey, Professor Emeritus  
Department of Educational Administration  
EdD, University of Northern Colorado, 1963

Phyllis M Robertson, Clinical Associate Professor  
Department of Special Education  
PhD, University of Texas at Austin, 1989

Rachel Robillard, Adjunct Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2002

Daniel H Robinson, Professor  
Department of Educational Psychology  
PhD, University of Nebraska - Lincoln, 1993

Aaron B Rochlen, Associate Professor  
Department of Educational Psychology  
PhD, University of Maryland College Park, 2000

Haydee M Rodriguez, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2000

Rodrigo J Rodriguez, Lecturer  
Department of Curriculum and Instruction  
PhD, University of Connecticut, 2001

Charles N Roper, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 1983

Nancy L Roser, Professor  
Priscilla Pond Flawn Regents Professorship in Early Childhood  
Education  
Department of Curriculum and Instruction  
EdD, Indiana University at Bloomington, 1970

John E Roueche, Professor  
Sid W. Richardson Regents Chair in Community College Leadership  
Department of Educational Administration  
PhD, Florida State University, 1964

Darrell K Royal, Professor  
Department of Kinesiology and Health Education  
BS, University of Oklahoma Norman Campus, 1950

Stephanie S Rude, Professor  
Department of Educational Psychology  
PhD, Stanford University, 1983

Frances M Rush, Lecturer  
Department of Kinesiology and Health Education  
MEd, University of Texas at Austin, 1978

Smita S Ruzicka, Lecturer  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2011

Victor Saenz, Assistant Professor  
Department of Educational Administration  
PhD, University of California-Los Angeles, 2005

Cynthia S Salinas, Associate Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1999

Delida Sanchez, Assistant Professor  
Department of Educational Psychology  
PhD, Columbia University in the City of New York, 2002

Janay B Sander, Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2001

Michael T Sanders, Lecturer  
Department of Kinesiology and Health Education  
EdD, University of Tennessee, 1985

Veronica G Sardegna, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Illinois at Urbana-Champaign, 2009

James L Schaller, Associate Professor  
Department of Special Education  
PhD, University of Wisconsin-Madison, 1991

Diane L Schallert, Professor  
Department of Educational Psychology  
PhD, Arizona State University Main, 1975

Paul D Schimelman, Lecturer  
Department of Kinesiology and Health Education  
BS, Southwest Texas Junior College, 1995

Jay D Scribner, Professor Emeritus  
Department of Educational Administration  
EdD, Stanford University, 1965

Edwin R Sharpe, Clinical Professor  
Department of Educational Administration  
PhD, University of Texas at Austin, 1980

Alissa R Sherry, Associate Professor  
Department of Educational Psychology  
PhD, University of Southern Mississippi, 2001

Joan M Shiring, Clinical Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 1986

Allison Skerrett, Assistant Professor  
Department of Curriculum and Instruction  
PhD, Boston College, 2007

Elizabeth A Smith, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2009

Patricia Ann Somers, Associate Professor  
Department of Educational Administration  
PhD, University of New Orleans, 1992

Audrey M Sorrells, Associate Professor  
Department of Special Education  
PhD, University of Florida, 1996

Ted D Spears, Adjunct Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of Texas Medical Branch, 1980

Janet T Spence, Professor Emeritus  
Department of Educational Psychology  
PhD, University of Iowa, 1949

Waneen W Spirduso, Professor Emeritus  
Department of Kinesiology and Health Education  
EdD, University of Texas at Austin, 1966

M Dixie Stanforth, Lecturer  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 2010

Philip R Stanforth, Lecturer  
Department of Kinesiology and Health Education  
MS, University of Arizona, 1978

Kevin D Stark, Professor  
Department of Educational Psychology  
PhD, University of Wisconsin-Madison, 1985

Kathryn E Starkes, Clinical Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Texas at Austin, 2009

Mary A Steinhardt, Professor  
Department of Kinesiology and Health Education  
EdD, University of Houston, 1985

Walter M Stroup, Associate Professor  
Department of Curriculum and Instruction  
EdD, Harvard University, 1996

Marie-Anne P Suizzo, Associate Professor  
Department of Educational Psychology  
EdD, Harvard University, 1997

Marilla D Svinicki, Professor  
Department of Educational Psychology  
Department of Educational Administration  
PhD, University of Colorado at Boulder, 1972

Elizabeth Swanson, Research Assistant Professor (Affiliated)  
Department of Special Education  
PhD, University of Texas at Austin, 2008

Hirofumi Tanaka, Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of Tennessee, 1995

Deborah J Tharinger, Professor  
Department of Educational Psychology  
PhD, University of California-Berkeley, 1981

Sylvia F Thompson, Associate Professor  
Department of Special Education  
PhD, University of Texas at Austin, 1999

Janice S Todd, Professor  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 1995

Martin L Tombari, Senior Lecturer  
Department of Educational Psychology  
PhD, University of Arizona, 1975

Ramona S Trevino, Clinical Assistant Professor  
Department of Educational Administration  
PhD, University of Texas at Austin, 2006

Keith D Turner, Professor Emeritus  
Department of Special Education  
PhD, University of Washington - Seattle, 1974

Edward P Tyson, Adjunct Assistant Professor  
Department of Kinesiology and Health Education  
MD, Tex Medl Sch Houston, U, 1982

Kenneth W Tyson, Associate Professor  
Department of Kinesiology and Health Education  
MEd, University of Texas at Austin, 1970

Kim W Tyson, Lecturer  
Department of Kinesiology and Health Education  
MS, Indiana University of Pennsylvania, 1982

Luis Urrieta, Associate Professor  
Department of Curriculum and Instruction  
PhD, University of North Carolina at Chapel Hill, 2003

Richard Valencia, Professor  
Department of Educational Psychology  
PhD, University of California-Santa Barbara, 1977

Angela Valenzuela, Professor  
Department of Curriculum and Instruction  
Department of Educational Administration  
PhD, Stanford University, 1990

Sharon Vaughn, Professor  
H. E. Hartfelder/The Southland Corporation Regents Chair in Human  
Resource Development  
Department of Special Education  
PhD, University of Arizona, 1981

Georghios Veletsianos, Assistant Professor  
Department of Curriculum and Instruction  
PhD, University of Minnesota-Twin Cities, 2008

Gregory J Vincent, Professor  
W. K. Kellogg Professorship of Community College Leadership  
Department of Educational Administration  
EdD, University of Pennsylvania, 2004

Linda K Voges, Lecturer  
Department of Curriculum and Instruction  
EdD, Baylor University, 1998

Lonnie H Wagstaff, Professor Emeritus  
Department of Educational Administration

EdD, University of Oklahoma Norman Campus, 1969

Thomas J Walters, Adjunct Associate Professor  
Department of Kinesiology and Health Education  
PhD, University of Texas at Austin, 1989

Rodney E Watson, Adjunct Professor  
Department of Educational Administration  
PhD, University of Missouri - Kansas City, 2007

Jeffrey C Wayman, Assistant Professor  
Department of Educational Administration  
PhD, Colorado State University, 2000

Claire E Weinstein, Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 1975

Melissa R Wetzell, Assistant Professor  
Department of Curriculum and Instruction  
PhD, Washington University in St Louis, 2007

Tiffany A Whittaker, Assistant Professor  
Department of Educational Psychology  
PhD, University of Texas at Austin, 2003

Frank W Wicker, Professor Emeritus  
Department of Educational Psychology  
PhD, Princeton University, 1966

Cheryl Y Wilkinson, Lecturer  
Department of Special Education  
PhD, University of Texas at Austin, 1983

Jack H Wilmore, Professor Emeritus  
Department of Kinesiology and Health Education

Mary J Worthy, Professor  
Department of Curriculum and Instruction  
PhD, University of Virginia (Old Code), 1989

James R Yates, Professor  
John L. and Elizabeth G. Hill Centennial Professorship  
Department of Educational Administration  
Department of Special Education  
PhD, University of Texas at Austin, 1971

San Yoon, Specialist  
Department of Kinesiology and Health Education  
EdD, United States Sports Academy, 1992

Dawn M Zimmaro, Lecturer  
Department of Educational Psychology  
PhD, Pennsylvania State University Park, 2003

Nina Isabel Zuna, Assistant Professor  
Department of Special Education  
PhD, University of Kansas Main Campus, 2007

## Cockrell School of Engineering Faculty

Jacob A Abraham, Professor  
Cockrell Family Regents Chair in Engineering #8

Department of Electrical and Computer Engineering  
PhD, Stanford University, 1974

P A Abusali, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1983

J K Aggarwal, Professor  
Cullen Trust for Higher Education Endowed Professorship in  
Engineering #2  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 1964

Maruthi R Akella, Associate Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Texas A & M University, 1998

Deji Akinwande, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2010

Richard A Alexander, Lecturer  
Department of Petroleum and Geosystems Engineering  
MS, University of Texas at Austin, 1985

David T Allen, Professor  
Melvin H. Gertz Regents Chair in Chemical Engineering  
Department of Chemical Engineering  
PhD, California Institute of Technology, 1983

Jerrold S Allen, Specialist  
Department of Mechanical Engineering  
BSME, University of Texas at Austin, 1998

Hal S Alper, Assistant Professor  
Department of Chemical Engineering  
PhD, Massachusetts Institute of Technology, 2006

Andrea Alu, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Università degli Studi Roma Tre, 2007

Catherine G Ambrose, Adjoint Associate Professor  
Department of Biomedical Engineering  
PhD, University of Texas at Austin, 1992

Billy H Amstead, Professor Emeritus  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1955

Jeffrey G Andrews, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2002

Aristotle Arapostathis, Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1982

Neal E Armstrong, Professor  
Zarrow Centennial Professorship in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1968

Adnan Aziz, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1996

Ivo M Babuska, Professor

Robert B. Trull Chair in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Academy of Sciences, 1955

Aaron Blair Baker, Assistant Professor  
Department of Biomedical Engineering  
PhD, Harvard University, 2006

Lee E Baker, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, Baylor College of Medicine, 1965

Michael Baldea, Assistant Professor  
Department of Chemical Engineering  
PhD, University of Minnesota-Twin Cities, 2006

Ross Baldick, Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1990

Matthew Thomas Balhoff, Assistant Professor  
Department of Petroleum and Geosystems Engineering  
PhD, Louisiana State University and Agricultural and Mechanical College, 2005

Sanjay K Banerjee, Professor  
Cockrell Family Regents Chair in Engineering #4  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 1983

Seth Robert Bank, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2006

James Andrew Bankson, Adjoint Associate Professor  
Department of Biomedical Engineering  
PhD, Texas A & M University, 2001

Kathleen S Barber, Professor  
AT&T Foundation Endowed Professorship in Engineering  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Arlington, 1992

Jonathan F Bard, Professor  
Department of Mechanical Engineering  
DSc, George Washington University, 1979

William C Bard, Senior Lecturer  
Department of Electrical and Computer Engineering  
MS, University of Texas at Austin, 1976

John W Barnes, Professor  
Cullen Trust for Higher Education Endowed Professorship in Engineering #6  
Department of Mechanical Engineering  
PhD, University of Arkansas Main Campus, 1971

Ronald E Barr, Professor  
Department of Mechanical Engineering  
PhD, Marquette University, 1975

Michael E Barrett, Research Associate Professor (Affiliated)  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1996

Don S Batory, Professor  
David Bruton, Jr. Centennial Professorship in Computer Sciences #1

Department of Electrical and Computer Engineering  
PhD, University of Toronto, 1981

Martin L Baughman, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, Massachusetts Institute of Technology, 1972

Oguzhan Bayrak, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Toronto, 1999

Joseph J Beaman, Professor  
Earnest F. Gloyne Regents Chair in Engineering, Cockrell Family Chair for Departmental Leadership #4  
Department of Mechanical Engineering  
ScD, Massachusetts Institute of Technology, 1979

H Kent Beasley, Clinical Professor  
Department of Mechanical Engineering  
MD, Tulane University, 1962

Eric B Becker, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of California-Berkeley, 1966

Michael F Becker, Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 1974

Anthony Bedford, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Rice University, 1967

Mikhail A Belkin, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 2004

Adela Ben-Yakar, Associate Professor  
Department of Mechanical Engineering  
PhD, Stanford University, 2001

Jeffrey K Bennighof, Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Virginia Polytechnic Institute and State University, 1986

Halil Berberoglu, Assistant Professor  
Department of Mechanical Engineering  
PhD, University of California-Los Angeles, 2008

Don T Berry, Lecturer  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1989

Srinivas V Bettadpur, Research Professor (Affiliated)  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1993

Jayanta Bhadra, Adjunct Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 2001

Amit Bhasin, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
DPhil, Texas A & M University, 2006

Chandra R Bhat, Professor  
Adnan Abou-Ayyash Centennial Professorship in Transportation Engineering



Department of Civil, Architectural, and Environmental Engineering  
PhD, Northwestern University, 1991

James Eric Bickel, Assistant Professor  
Department of Mechanical Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, Stanford University, 1999

Kendra M Foltz Biegalski, Lecturer  
Department of Mechanical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1998

Steven R Biegalski, Associate Professor  
Department of Mechanical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1996

George Biros, Professor  
W. A. "Tex" Moncrief, Jr. Endowment in Simulation-Based Engineering  
and Sciences - Endowed Chair No. 2  
Department of Mechanical Engineering  
PhD, Carnegie Mellon University, 2000

Michael F Blackhurst, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Carnegie Mellon University, 2011

David T Blackstock, Professor Emeritus  
Department of Mechanical Engineering  
PhD, Harvard University, 1960

David G Bogard, Professor  
Department of Mechanical Engineering  
PhD, Purdue University Main Campus, 1982

Paul M Bommer, Senior Lecturer  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1979

Roger T Bonnecaze, Professor  
Bill L. Stanley Endowed Leadership Chair in Chemical Engineering, T.  
Brockett Hudson Professorship in Chemical Engineering  
Department of Chemical Engineering  
PhD, California Institute of Technology, 1991

John D Borcharding, Adjunct Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Stanford University, 1972

Francis X Bostick, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1964

David L Bourell, Professor  
Temple Foundation Endowed Professorship No. 2  
Department of Mechanical Engineering  
PhD, Stanford University, 1979

Alan C Bovik, Professor  
Keys and Joan Curry/Cullen Trust Endowed Chair  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 1984

Stephen Boyles, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 2009

John E Breen, Professor Emeritus

Department of Civil, Architectural, and Environmental Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1962

Gregory L Brooks, Senior Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
MArch, University of Texas at Austin, 1996

Michael D Brown, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 2005

Michael D Bryant, Professor  
Accenture Endowed Professorship in Manufacturing Systems  
Engineering  
Department of Mechanical Engineering  
PhD, Northwestern University, 1981

Steven L Bryant, Associate Professor  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1986

John F Burgin, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1995

Ned H Burns, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1962

Troy D Butler, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Colorado State University, 2009

John H Byrne, Adjoint Professor  
Department of Biomedical Engineering  
PhD, Polytechnic University, 1973

Carlos H Caldas, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 2003

Matthew I Campbell, Associate Professor  
Department of Mechanical Engineering  
PhD, Carnegie Mellon University, 2000

Constantine Caramanis, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Massachusetts Institute of Technology, 2006

George L Cardwell, Senior Lecturer  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1970

Ben H Caudle, Professor Emeritus  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1963

Armand J Chaput, Senior Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Texas A & M University, 1966

Randall J Charbeneau, Professor  
Jewel McAlister Smith Professorship in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Stanford University, 1978

Craig M Chase, Associate Professor

Department of Electrical and Computer Engineering  
PhD, Cornell University, 1993

James R Chelikowsky, Professor  
W. A. "Tex" Moncrief, Jr. Chair in Computational Materials  
Department of Chemical Engineering  
PhD, University of California-Berkeley, 1975

Dongmei Chen, Assistant Professor  
Department of Mechanical Engineering  
PhD, University of Michigan-Ann Arbor, 2006

Ray T Chen, Professor  
Cullen Trust for Higher Education Endowed Professorship in  
Engineering #3  
Department of Electrical and Computer Engineering  
PhD, University of California-Irvine, 1991

Julian Cheng, Professor  
Cockrell Family Regents Chair in Engineering #3  
Department of Electrical and Computer Engineering  
PhD, Harvard University, 1973

Derek Chiou, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, Massachusetts Institute of Technology, 1999

Noel T Clemens, Professor  
Bob R. Dorsey Professorship in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Stanford University, 1991

Richard L Corsi, Professor  
E. C. H. Bantel Professorship for Professional Practice  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Davis, 1989

Brady R Cox, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 2006

Harvey G Cragon, Professor Emeritus  
Department of Electrical and Computer Engineering  
BSEE, Louisiana Tech University, 1950

Roy R Craig, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Illinois at Urbana-Champaign, 1960

Michael E Crawford, Professor Emeritus  
Department of Mechanical Engineering  
PhD, Stanford University, 1976

Richard H Crawford, Professor  
Department of Mechanical Engineering  
PhD, Purdue University Main Campus, 1989

Alexandre K Da Silva, Assistant Professor  
Department of Mechanical Engineering  
PhD, Duke University, 2005

Adriana Costa Da Silveira, Adjunct Assistant Professor  
Department of Biomedical Engineering  
PhD, University of Florida, 1998

Jiukun Dai, Lecturer  
Department of Civil, Architectural, and Environmental Engineering

PhD, University of Kentucky, 2006

Clinton N Dawson, Professor  
Edward S. Hyman Endowed Chair in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Rice University, 1988

Ghislaine Maria De Regge, Senior Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1986

Gustavo A De Veciana, Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1993

Neil E Deeds, Lecturer  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1999

Mark Deinert, Assistant Professor  
Department of Mechanical Engineering  
PhD, Cornell University, 2003

Mojdeh Delshad, Research Professor (Affiliated)  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1986

Leszek F Demkowicz, Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Cracow Univ of Technology, 1982

Ashish Deshpande, Assistant Professor  
Department of Mechanical Engineering  
PhD, University of Michigan-Ann Arbor, 2007

Luigi DiBiase, Adjunct Assistant Professor  
Department of Biomedical Engineering  
MD, University of Bari, 2000

David DiCarlo, Assistant Professor  
Department of Petroleum and Geosystems Engineering  
PhD, Cornell University, 1994

Kenneth R Diller, Professor  
Robert M. and Prudie Leibrock Endowed Professorship in Engineering  
Department of Biomedical Engineering  
ScD, Massachusetts Institute of Technology, 1972

Dragan Djurdjanovic, Assistant Professor  
Department of Mechanical Engineering  
PhD, University of Michigan-Ann Arbor, 2002

Ananth Dodabalapur, Professor  
Ashley H. Priddy Centennial Professorship in Engineering  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1990

Arwin A Dougal, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 1957

Mircea D Driga, Professor  
Department of Electrical and Computer Engineering  
PhD, University of Kentucky, 1990

Raynor L Duncombe, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
Department of Aerospace Engineering and Engineering Mechanics

PhD, Yale University, 1956

Andrew K Dunn, Associate Professor  
Department of Biomedical Engineering  
PhD, University of Texas at Austin, 1997

Cyril J Durrenberger, Senior Lecturer  
Department of Chemical Engineering  
MS, University of Texas at Austin, 1977

Gretchen Edelson, Clinical Assistant Professor  
UTeach-Engineering  
MS, Texas Tech University, 1991

Thomas F Edgar, Professor  
George T. and Gladys H. Abell Endowed Chair of Engineering  
Department of Chemical Engineering  
PhD, Princeton University, 1971

Thomas A Edison, Lecturer  
Department of Chemical Engineering  
PhD, University of Maryland College Park, 1998

John G Ekerdt, Professor  
Dick Rothwell Endowed Chair in Chemical Engineering  
Department of Chemical Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, University of California-Berkeley, 1979

Chadi Said El Mohtar, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Purdue University Main Campus, 2008

Robert B Eldridge, Distinguished Senior Lecturer  
Department of Chemical Engineering  
PhD, University of Texas at Austin, 1986

Zwy Eliezer, Professor Emeritus  
Department of Mechanical Engineering  
D SC, Israel Inst Of Tech, 1972

Christopher John Ellison, Assistant Professor  
Department of Chemical Engineering  
PhD, Northwestern University, 2005

Janet L Ellzey, Professor  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1985

Stanislav Emelianov, Associate Professor  
Department of Biomedical Engineering  
PhD, University of Moscow, 1992

Michael D Engelhardt, Professor  
DeWitt C. Greer Centennial Professorship in Transportation  
Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1989

Mattan Erez, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2007

Thomas P Erlinger, Clinical Assistant Professor  
Department of Mechanical Engineering  
MD, University of Texas Health Science Center at San Antonio, 1993

Brian L Evans, Professor

Engineering Foundation Professorship  
Department of Electrical and Computer Engineering  
PhD, Georgia Institute of Technology, 1993

Ofodike A Ezekoye, Professor  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1991

William F Fagelson, Lecturer  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 2004

Eric P Fahrenthold, Professor  
Department of Mechanical Engineering  
PhD, Rice University, 1984

Jeanne Sullivan Falcon, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Massachusetts Institute of Technology, 1994

Donglei Fan, Assistant Professor  
Department of Mechanical Engineering  
PhD, Johns Hopkins University, 2007

Marc D Feldman, Adjunct Professor  
Department of Biomedical Engineering  
MD, University of Pennsylvania, 1981

Gregory L Fenves, Professor  
Dean's Chair for Excellence in Engineering, Cockrell Family Dean's  
Chair in Engineering Excellence, Jack and Beverly Randall Dean's  
Chair for Excellence in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1984

Benito Fernandez, Associate Professor  
Department of Mechanical Engineering  
PhD, Massachusetts Institute of Technology, 1988

Paulo J Ferreira, Associate Professor  
Department of Mechanical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1996

Raissa Patricia Ferron, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Northwestern University, 2008

Robert H Flake, Professor  
Department of Electrical and Computer Engineering  
DSc, Washington University in St Louis, 1962

Kevin J Folliard, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1995

Davis L Ford, Adjunct Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1966

David W Fowler, Professor  
Joe J. King Chair of Engineering No. 2, T. U. Taylor Professorship in  
Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Colorado at Boulder, 1965

Wallace T Fowler, Professor

Paul D. and Betty Robertson Meek Centennial Professorship in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1965

Douglas J Fox, Adjunct Assistant Professor  
Department of Biomedical Engineering  
MD, Washington University in St Louis, 1999

Karl H Frank, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Lehigh University, 1972

Benny D Freeman, Professor  
Kenneth A. Kobe Professorship in Chemical Engineering  
Department of Chemical Engineering  
PhD, University of California-Berkeley, 1988

Keith A Friedman, Lecturer  
Department of Chemical Engineering  
PhD, University of Texas at Austin, 2003

Richard W Furlong, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1963

Donald S Fussell, Professor  
Trammell Crow Regents Professorship in Computer Science  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Dallas, 1980

Alexander Yurievich Galenko, Lecturer  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 2008

Venkat Ganesan, Professor  
Department of Chemical Engineering  
PhD, Massachusetts Institute of Technology, 1999

Vijay K Garg, Professor  
Cullen Trust for Higher Education Endowed Professorship in Engineering #5  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1988

Peter R Gascoyne, Adjunct Professor  
Department of Biomedical Engineering  
PhD, Bangor University, 1979

George Georgiou, Professor  
Cockrell Family Regents Chair in Engineering #9  
Department of Chemical Engineering  
Department of Biomedical Engineering  
PhD, Cornell University, 1987

Andreas M Gerstlauer, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Irvine, 2004

Ali Ghahremaninezhad, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 2011

Wassim Michael Ghannoum, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 2007

Ranjit Gharpurey, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1995

Omar Nabih Ghattas, Professor  
John A. and Katherine G. Jackson Chair in Computational Geosciences  
Department of Mechanical Engineering  
Department of Biomedical Engineering  
PhD, Duke University, 1988

Joydeep Ghosh, Professor  
Schlumberger Centennial Chair in Electrical Engineering  
Department of Electrical and Computer Engineering  
PhD, University of Southern California, 1988

Robert B Gilbert, Professor  
Brunswick-Abernathy Regents Professorship in Soil Dynamics and Geotechnical Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1993

Brijesh S Gill, Adjoint Assistant Professor  
Department of Biomedical Engineering  
MD, University of Alabama at Birmingham, 1997

Earnest F Gloyna, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
DR ENGR, , 1953

David B Goldstein, Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, California Institute of Technology, 1990

Mario J Gonzalez, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1971

John B Goodenough, Professor  
Virginia H. Cockrell Centennial Chair in Engineering  
Department of Mechanical Engineering  
Department of Electrical and Computer Engineering  
PhD, University of Chicago, 1952

William M Grady, Professor  
Josey Centennial Professorship in Energy Resources  
Department of Electrical and Computer Engineering  
PhD, Purdue University Main Campus, 1983

Kenneth E Gray, Professor  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1963

Charles G Groat, Professor  
John A. and Katherine G. Jackson Chair in Energy and Mineral Resources  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1970

Michael Richard Haberman, Lecturer  
Department of Mechanical Engineering  
PhD, Georgia Institute of Technology, 2007

John Steven Haglund, Lecturer  
Department of Mechanical Engineering  
PhD, Texas A & M University, 2003



Matthew J Hall, Professor  
Department of Mechanical Engineering  
PhD, Princeton University, 1987

Neal Hall, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Georgia Institute of Technology, 2004

Gary A Hallock, Professor  
Department of Electrical and Computer Engineering  
PhD, Rensselaer Polytechnic Institute, 1982

Mark F Hamilton, Professor  
Harry L. Kent, Jr. Professorship in Mechanical Engineering  
Department of Mechanical Engineering  
PhD, Pennsylvania State University Main Campus, 1983

Raymond Jackson Harshbarger, Adjunct Professor  
Department of Biomedical Engineering  
PhD, University of Rochester, 1994

Hillary Hart, Distinguished Senior Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Bryn Mawr College, 1981

John J Hasenbein, Associate Professor  
Department of Mechanical Engineering  
PhD, Georgia Institute of Technology, 1999

Arjang Hassibi, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2005

Linda J Hayes, Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1977

Robert W Heath, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2002

Robert E Hebner, Research Professor (Affiliated)  
Department of Mechanical Engineering  
PhD, University of Missouri - Rolla, 1971

Adam Heller, Professor Emeritus  
Department of Chemical Engineering  
PhD, The Hebrew University of Jerusalem, 1961

Todd A Helwig, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1994

Carlos H Hidrovo Chavez, Assistant Professor  
Department of Mechanical Engineering  
PhD, Massachusetts Institute of Technology, 2001

Lea Hildebrandt Ruiz, Assistant Professor  
Department of Chemical Engineering  
PhD, Carnegie Mellon University, 2011

Paul S Ho, Professor  
Cockrell Family Regents Chair in Engineering #5  
Department of Mechanical Engineering  
PhD, Rensselaer Polytechnic Institute, 1965

Ben R Hodges, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Stanford University, 1997

Edward R Holley, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
ScD, Massachusetts Institute of Technology, 1965

Rodney Horton, Adjunct Professor  
Department of Biomedical Engineering  
MD, University of Texas Southwestern Medical Center at Dallas, 1988

John R Howell, Professor Emeritus  
Department of Mechanical Engineering  
Department of Mechanical Engineering  
PhD, Case Western Reserve University, 1962

Rui Huang, Associate Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Princeton University, 2001

William R Hudson, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1965

Thomas J Hughes, Professor  
CAM Chair III  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of California-Berkeley, 1974

Chun Huh, Research Professor (Affiliated)  
Department of Petroleum and Geosystems Engineering  
PhD, University of Minnesota-Duluth, 1965

David G Hull, Professor  
M. J. Thompson Regents Professorship in Aerospace Engineering and Engineering Mechanics  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Rice University, 1967

Todd E Humphreys, Assistant Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Cornell University, 2008

Gyeong S Hwang, Professor  
Department of Chemical Engineering  
PhD, California Institute of Technology, 1999

Jang-Hi Im, Research Professor (Affiliated)  
Department of Mechanical Engineering  
ScD, Massachusetts Institute of Technology, 1976

Marcia Isakson, Lecturer  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 2002

Vijay Janapa Reddi, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Harvard University, 2010

Jennifer E Jefferson, Lecturer  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 2011

Ning Jiang, Assistant Professor  
Department of Biomedical Engineering  
PhD, Georgia Institute of Technology, 2005

James O Jirsa, Professor  
Janet S. Cockrell Centennial Chair in Engineering

Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1963

Lizy K John, Professor  
B. N. Gafford Professorship in Electrical Engineering  
Department of Electrical and Computer Engineering  
PhD, Pennsylvania State University Main Campus, 1993

Keith P Johnston, Professor  
M. C. (Bud) and Mary Beth Baird Endowed Chair  
Department of Chemical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1981

Jerold W Jones, Professor Emeritus  
Department of Mechanical Engineering  
PhD, University of Utah, 1970

Miguel Jose-Yacamán, Adjunct Professor  
Department of Chemical Engineering  
PhD, Nat University of Mexico, 1973

Maria G Juenger, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Northwestern University, 1999

Christine L Julien, Associate Professor  
Department of Electrical and Computer Engineering  
DSc, Washington University in St Louis, 2004

Davor Juricic, Professor Emeritus  
Department of Mechanical Engineering  
D SC, Foreign Institution, 1964

Loukas F Kallivokas, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Carnegie Mellon University, 1995

Lynn E Katz, Professor  
Bettie Margaret Smith Professorship in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Michigan-Ann Arbor, 1993

Fayez S Kazi, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
MSE, University of Texas at Austin, 2001

Stephen W Keckler, Professor  
Department of Electrical and Computer Engineering  
PhD, Massachusetts Institute of Technology, 1998

Patrick Kevin Kelley, Adjunct Associate Professor  
Department of Biomedical Engineering  
MD, Baylor College of Medicine, 1998

Thomas W Kennedy, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1965

Alireza Khademhosseini, Harrington Faculty Fellow  
Department of Biomedical Engineering  
PhD, Massachusetts Institute of Technology, 2005

Sarfraz Khurshid, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, Massachusetts Institute of Technology, 2004

Thomas M Kiehne, Senior Lecturer  
Department of Mechanical Engineering

PhD, University of Texas at Austin, 1985

Miryung Kim, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, University of Washington - Seattle, 2008

David R Kincaid, Senior Lecturer  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1971

Spyridon A Kinnas, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Massachusetts Institute of Technology, 1985

Kerry A Kinney, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Davis, 1996

Mary Jo Kirisits, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 2000

Dale E Klein, Professor  
Reese Endowed Professorship in Engineering  
Department of Mechanical Engineering  
PhD, University of Missouri - Columbia, 1977

Richard E Klingner, Professor  
L. P. Gilvin Centennial Professorship in Civil Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1977

Kara Kockelman, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1998

Billy V Koen, Professor Emeritus  
Department of Mechanical Engineering  
ScD, Massachusetts Institute of Technology, 1968

Joseph Hong Yui Koo, Lecturer  
Department of Mechanical Engineering  
ScD, George Washington University, 1987

Brian A Korgel, Professor  
Matthew Van Winkle Regents Professorship in Chemical Engineering  
Department of Chemical Engineering  
PhD, University of California-Los Angeles, 1997

Lothar E Koschmieder, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Bonn, 1963

Desiderio Kovar, Professor  
Department of Mechanical Engineering  
PhD, Carnegie Mellon University, 1995

Herbert C Krasner, Senior Lecturer  
Department of Electrical and Computer Engineering  
PhD, University of Missouri - Rolla, 1979

Thomas J Krueger, Senior Lecturer  
Department of Mechanical Engineering  
PhD, Texas A & M University, 1975

Kirby A Kuntz, Lecturer  
Department of Civil, Architectural, and Environmental Engineering

PhD, Pennsylvania State University Main Campus, 1994

Erhan Kutanoglu, Associate Professor  
Department of Mechanical Engineering  
PhD, Lehigh University, 1999

Alexis Kwasinski, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 2007

Stelios Kyriakides, Professor  
Cockrell Family Chair in Engineering No. 10  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, California Institute of Technology, 1980

Larry W Lake, Professor  
W. A. "Monty" Moncrief Centennial Chair in Petroleum Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, Rice University, 1973

Simon S Lam, Professor  
Regents Chair in Computer Sciences #1  
Department of Electrical and Computer Engineering  
PhD, University of California-Los Angeles, 1974

Jamie P Lamb, Professor Emeritus  
Department of Mechanical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1961

Chad Matthew Landis, Associate Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of California-Santa Barbara, 1999

Sheldon Landsberger, Professor  
Hayden Head Centennial Professorship  
Department of Mechanical Engineering  
PhD, University of Toronto, 1982

Hon Chung Lau, Adjunct Professor  
Department of Petroleum and Geosystems Engineering  
PhD, Princeton University, 1982

Desmond F Lawler, Professor  
Nasser I. Al-Rashid Chair in Civil Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of North Carolina at Chapel Hill, 1980

Clyde E Lee, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1962

Jack C Lee, Professor  
Cullen Trust for Higher Education Endowed Professorship in  
Engineering #4  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 1988

Fernanda Lustosa Leite, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
DPhil, Carnegie Mellon University, 2009

William G Lesso, Professor Emeritus  
Department of Mechanical Engineering  
PhD, Case Western Reserve University, 1967

Wei Li, Associate Professor  
Department of Mechanical Engineering

PhD, University of Michigan-Ann Arbor, 1999

Kenneth M Liechti, Professor  
E. P. Schoch Professorship in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, California Institute of Technology, 1980

Glenn Lightsey, Professor  
William David Blunk Memorial Professorship  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Stanford University, 1997

Howard M Liljestrand, Professor  
Gerard A. Rohlich Regents Professorship in Civil Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, California Institute of Technology, 1980

Frederick F Ling, Professor Emeritus  
Department of Mechanical Engineering  
DSc, Carnegie Mellon University, 1954

Hao Ling, Professor  
L. B. (Preach) Meaders Professorship in Engineering  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 1986

Gerald J Lipovski, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 1969

Xuewu Liu, Adjunct Associate Professor  
Department of Biomedical Engineering  
PhD, Kent State University Main Campus, 2002

Douglas R Lloyd, Professor  
Henry Beckman Professorship in Chemical Engineering  
Department of Chemical Engineering  
PhD, University of Waterloo, 1977

Raymond C Loehr, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Wisconsin-Madison, 1961

Raul G Longoria, Professor  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1989

Nanshu Lu, Assistant Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Harvard University, 2009

Randy B Machemehl, Professor  
Nasser I. Al-Rashid Centennial Professorship in Transportation  
Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1975

Chris A Mack, Adjunct Assistant Professor  
Department of Chemical Engineering  
PhD, University of Texas at Austin, 1998

Lori A Magruder, Research Assistant Professor (Affiliated)  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 2001

David R Maidment, Professor  
Hussein M. Alharthy Centennial Chair in Civil Engineering

Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1976

Krishan A Malik, Adjunct Professor  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1987

Joseph F Malina, Professor  
C. W. Cook Professorship in Environmental Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Wisconsin-Madison, 1961

Arumugam Manthiram, Professor  
Joe C. Walter, Jr. Chair in Engineering  
Department of Mechanical Engineering  
PhD, Indian Institute of Technology, 1980

Lance Manuel, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Stanford University, 1993

Belinda Marchand, Adjunct Assistant Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Purdue University Main Campus, 2004

Harris L Marcus, Professor Emeritus  
Department of Mechanical Engineering  
PhD, Northwestern University, 1966

Stephen Richard Marek, Lecturer  
Department of Biomedical Engineering  
PhD, University of Texas at Austin, 2009

Hans M Mark, Professor  
John J. McKetta Centennial Energy Chair in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Massachusetts Institute of Technology, 1954

Mia K Markey, Associate Professor  
Department of Biomedical Engineering  
PhD, Duke University, 2001

Kurt M Marshek, Professor Emeritus  
Department of Mechanical Engineering  
, Ohio State U Main Campus,

Lealon L Martin, Lecturer  
Department of Chemical Engineering  
PhD, University of California-Los Angeles, 2002

Lydia M Martin, Assistant Professor  
Department of Chemical Engineering  
PhD, Cornell University, 2008

Glenn Y Masada, Professor  
Department of Mechanical Engineering  
ScD, Massachusetts Institute of Technology, 1980

Lee H Matlock, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
MS, University of Texas at Austin, 1950

Ronald D Matthews, Professor  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1977

Jennifer A Maynard, Assistant Professor  
Department of Chemical Engineering

PhD, University of Texas at Austin, 2002

Robert B McCann, Adjunct Professor  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1975

Talia Melanie McCray, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Michigan-Ann Arbor, 2001

Benj F McCullough, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1969

Elena C McDonald-Buller, Research Associate Professor (Affiliated)  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1996

John J McKetta, Professor Emeritus  
Department of Chemical Engineering  
PhD, University of Michigan-Ann Arbor, 1946

Daene C McKinney, Professor  
W.A. (Bill) Cunningham Professorship  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Cornell University, 1990

John S McLeod, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 2000

Mark E Mear, Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Harvard University, 1986

Fatima A Merchant, Adjunct Assistant Professor  
Department of Biomedical Engineering  
PhD, University of Texas at Austin, 1995

Robert Melancton Metcalfe, Professor  
Department of Electrical and Computer Engineering  
PhD, Harvard University, 1973

Jeremy P Meyers, Assistant Professor  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1998

Thomas E Milner, Professor  
Marion E. Forsman Centennial Professorship in Engineering  
Department of Biomedical Engineering  
Department of Electrical and Computer Engineering  
PhD, University of Arizona, 1991

Kishore Mohanty, Professor  
H. B. (Burt) Harkins, Jr. Professorship of Petroleum Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, University of Minnesota-Duluth, 1981

Tessie J Moon, Professor  
Department of Mechanical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1989

J S Moore, Professor  
Admiral B. R. Inman Centennial Chair in Computing Theory  
Department of Electrical and Computer Engineering  
PhD, University of Edinburgh, 1973

Ora C Moore, Senior Lecturer



Department of Mechanical Engineering  
MA, University of Texas at Austin, 1990

David P Morton, Professor  
Engineering Foundation Endowed Professorship #1  
Department of Mechanical Engineering  
PhD, Stanford University, 1993

Robert D Moser, Professor  
Department of Mechanical Engineering  
PhD, Stanford University, 1984

Charles B Mullins, Professor  
Z. D. Bonner Professorship of Chemical Engineering  
Department of Chemical Engineering  
PhD, California Institute of Technology, 1990

Stephen P Mulva, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Georgia Institute of Technology, 2004

Jayathi Murthy, Professor  
Ernest Cockrell, Jr., Memorial Chair in Engineering, Cockrell Family  
Chair for Departmental Leadership #4  
Department of Mechanical Engineering  
PhD, University of Minnesota-Twin Cities, 1984

Mohsen Nakhaeinejad, Lecturer  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 2010

Andrea Natale, Adjunct Professor  
Department of Biomedical Engineering  
MD, University of Florence, 1985

Dean P Neikirk, Professor  
Cullen Trust for Higher Education Endowed Professorship in  
Engineering #7  
Department of Electrical and Computer Engineering  
PhD, California Institute of Technology, 1984

Steven D Nelson, Senior Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
JD, Southern Methodist University, 1976

Richard R Neptune, Professor  
Department of Mechanical Engineering  
PhD, University of California-Davis, 1996

Scott Nettles, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, Carnegie Mellon University, 1996

Quoc Phuc Nguyen, Associate Professor  
Department of Petroleum and Geosystems Engineering  
PhD, Delft University of Technology, 2004

Steven P Nichols, Professor  
Annis and Jack Bowen Endowed Professorship in Engineering  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1975

Atila Novoselac, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Pennsylvania State University Main Campus, 2004

William J O'Brien, Associate Professor

Department of Civil, Architectural, and Environmental Engineering  
PhD, Stanford University, 1998

James T O'Connor, Professor  
C. T. Wells Professorship in Project Management  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1983

Cesar A Ocampo, Associate Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Colorado at Boulder, 1996

J T Oden, Professor  
Cockrell Family Regents Chair in Engineering #2, Peter O'Donnell, Jr.  
Centennial Chair in Computing Systems  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Oklahoma State University Main Campus, 1962

Jon E Olson, Associate Professor  
Department of Petroleum and Geosystems Engineering  
PhD, Stanford University, 1991

Roy E Olson, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1960

Raymond Lee Orbach, Professor  
Cockrell Family Chair in Engineering No. 12  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1960

Michael E Orshansky, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Berkeley, 2001

Andrew G Osborne, Lecturer  
Department of Mechanical Engineering  
PhD, University of Glasgow, 2006

Zhigang Pan, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of California-Los Angeles, 2000

Ronald L Panton, Professor Emeritus  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1966

Michael P Pappas, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 2004

Paola Passalacqua, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Minnesota-Twin Cities, 2009

Yale N Patt, Professor  
Ernest Cockrell, Jr. Centennial Chair in Engineering  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 1966

Tadeusz W Patzek, Professor  
Cockrell Family Chair in Engineering No. 11, Lois K. and Richard D.  
Folger Leadership Chair in Petroleum and Geosystems Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, Silesian University of Technology, 1979

Donald R Paul, Professor

Ernest Cockrell, Sr. Chair in Engineering  
Department of Chemical Engineering  
PhD, University of Wisconsin-Madison, 1965

John A Pearce, Professor  
Temple Foundation Endowed Professorship No. 3  
Department of Electrical and Computer Engineering  
PhD, Purdue University Main Campus, 1980

Lisa Peppas, Adjunct Professor  
Department of Biomedical Engineering  
PhD, Purdue University Main Campus, 1988

Nikolaos A Peppas, Professor  
Fletcher Stuckey Pratt Chair in Engineering, Cockrell Family Chair for  
Departmental Leadership #1  
Department of Biomedical Engineering  
Department of Chemical Engineering  
ScD, Massachusetts Institute of Technology, 1973

Dewayne E Perry, Professor  
Motorola Regents Chair in Electrical and Computer Engineering  
Department of Electrical and Computer Engineering  
PhD, Stevens Institute of Technology, 1978

Chadee Persad, Senior Lecturer  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1983

Daniel L Peterson, Adjunct Professor  
Department of Biomedical Engineering  
MD, University of Colorado at Boulder, 1988

Mostafa Pirnia, Senior Lecturer  
Department of Mechanical Engineering  
MS, University of Tehran, 1965

Michael E Poehl, Lecturer  
Department of Chemical Engineering  
MBA, University of Houston, 1988

Steven R Poole, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1991

Gary A Pope, Professor  
Texaco Centennial Chair in Petroleum Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, Rice University, 1972

Elmira Popova, Professor  
Department of Mechanical Engineering  
PhD, Case Western Reserve University, 1995

Edward J Powers, Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 1965

Masa Prodanovic, Assistant Professor  
Department of Petroleum and Geosystems Engineering  
PhD, New York University, 2005

Jorge A Prozzi, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 2001

Mitchell W Pryor, Lecturer

Department of Mechanical Engineering  
PhD, University of Texas at Austin, 2002

Llewellyn K Rabenberg, Associate Professor  
Department of Mechanical Engineering  
PhD, University of California-Berkeley, 1983

Varun Rai, Assistant Professor  
Department of Mechanical Engineering  
PhD, Stanford University, 2008

L L Raja, Associate Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1996

Kenneth M Ralls, Professor  
Department of Mechanical Engineering  
ScD, Massachusetts Institute of Technology, 1964

Venkatramanan Raman, Associate Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Iowa State University, 2003

D'Arcy C Randall, Senior Lecturer  
Department of Chemical Engineering  
PhD, University of Texas at Austin, 2001

Theodore S Rappaport, Professor  
William and Bettye Nowlin Chair in Engineering  
Department of Electrical and Computer Engineering  
PhD, Purdue University Main Campus, 1987

Howard F Rase, Professor Emeritus  
Department of Chemical Engineering  
PhD, University of Wisconsin-Madison, 1952

Ellen M Rathje, Professor  
Warren S. Bellows Centennial Professorship in Civil Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1997

Krishnaswa Ravi-Chandar, Professor  
Temple Foundation Endowed Professorship No. 1  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, California Institute of Technology, 1982

Leonard F Register, Professor  
Department of Electrical and Computer Engineering  
PhD, North Carolina State University, 1990

Danny D Reible, Professor  
Bettie Margaret Smith Chair in Environmental Health Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, California Institute of Technology, 1982

Pengyu Ren, Associate Professor  
Department of Biomedical Engineering  
PhD, University of Cincinnati Main Campus, 1999

John A Rickard, Senior Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
MS, University of Texas at Austin, 1982

Eugene A Ripperger, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Stanford University, 1952

Gary T Rochelle, Professor

Carol and Henry Groppe Professorship in Chemical Engineering  
Department of Chemical Engineering  
PhD, University of California-Berkeley, 1977

Gregory J Rodin, Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Massachusetts Institute of Technology, 1986

Peter J Rossky, Professor  
Marvin K. Collie-Welch Regents Chair in Chemistry  
Department of Chemical Engineering  
PhD, Harvard University, 1978

Charles H Roth, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 1962

Krishnendu Roy, Associate Professor  
Department of Biomedical Engineering  
PhD, Johns Hopkins University, 2000

Nestor Rubiano-Benavides, Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1998

Rodney S Ruoff, Professor  
Cockrell Family Regents Chair in Engineering #7  
Department of Mechanical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1988

Ryan P Russell, Assistant Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 2004

Henry G Rylander, Professor  
Harry H. Power Professorship in Engineering  
Department of Biomedical Engineering  
Department of Electrical and Computer Engineering  
MD, University of Texas Health Science Center at San Antonio, 1974

Michael S Sacks, Professor  
W.A. "Tex" Moncrief, Jr. Endowment in Simulation-Based Engineering  
and Sciences - Endowed Chair No. 1  
Department of Biomedical Engineering  
PhD, University of Texas at Arlington, 1992

Isaac C Sanchez, Professor  
William J. (Bill) Murray, Jr. Endowed Chair of Engineering  
Department of Chemical Engineering  
PhD, University of Delaware, 1969

Juan M Sanchez, Professor  
Temple Foundation Endowed Professorship No. 4  
Department of Mechanical Engineering  
PhD, University of California-Los Angeles, 1977

Irwin W Sandberg, Professor Emeritus  
Department of Electrical and Computer Engineering  
DEE, Polytechnic University, 1958

Sujay Sanghavi, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 2006

Surya Santoso, Associate Professor  
Department of Electrical and Computer Engineering

PhD, University of Texas at Austin, 1996

Sripadma Satyanarayana, Lecturer  
Department of Chemical Engineering  
PhD, University of Texas at Arlington, 1999

Richard A Schapery, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, California Institute of Technology, 1962

Robert S Schechter, Professor Emeritus  
Department of Petroleum and Geosystems Engineering  
Department of Chemical Engineering  
PhD, University of Minnesota-Twin Cities, 1956

Christine E Schmidt, Professor  
The BFGoodrich Endowed Professorship in Materials Engineering  
Department of Biomedical Engineering  
Department of Chemical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1995

Philip S Schmidt, Professor  
Donald J. Douglass Centennial Professorship in Engineering  
Department of Mechanical Engineering  
PhD, Stanford University, 1969

Erich A Schneider, Associate Professor  
Department of Mechanical Engineering  
PhD, Cornell University, 2002

Bob E Schutz, Professor  
Joe J. King Chair of Engineering, The FSX Professorship in Space  
Applications and Exploration  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1969

Carroll T Science, Senior Lecturer  
Department of Chemical Engineering  
PhD, University of Oklahoma Norman Campus, 1966

Carolyn Conner Seepersad, Assistant Professor  
Department of Mechanical Engineering  
PhD, Georgia Institute of Technology, 2004

Pablo David Seleson, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Florida State University, 2010

Luis Sentis, Assistant Professor  
Department of Mechanical Engineering  
PhD, Stanford University, 2007

Kamy Sepehrnoori, Professor  
Bank of America Centennial Professorship in Petroleum Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, University of Texas at Austin, 1977

Sanjay Shakkottai, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 2002

Mukul M Sharma, Professor  
W. A. "Tex" Moncrief, Jr. Centennial Chair in Petroleum Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, University of Southern California, 1985

Li Shi, Professor

Department of Mechanical Engineering  
PhD, University of California-Berkeley, 2000

Jeffrey A Siegel, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 2002

Jayant Sirohi, Assistant Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Maryland College Park, 2002

Richard W Smalling, Adjoint Professor  
Department of Biomedical Engineering  
PhD, University of Texas Health Science Center at Houston, 1977

Michael H Smolensky, Adjunct Professor  
Department of Biomedical Engineering  
PhD, University of Illinois at Urbana-Champaign, 1971

Konstantin V Sokolov, Adjunct Associate Professor  
Department of Biomedical Engineering  
PhD, Moscow State University, 1992

Charles A Sorber, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1971

Gerald E Speitel, Professor  
John J. McKetta Energy Professorship in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of North Carolina at Chapel Hill, 1985

S V Sreenivasan, Professor  
Department of Mechanical Engineering  
PhD, Ohio State U Main Campus, 1994

Sanjay Srinivasan, Associate Professor  
Department of Petroleum and Geosystems Engineering  
PhD, Stanford University, 2000

Jeanne Casstevens Stachowiak, Assistant Professor  
Department of Biomedical Engineering  
PhD, University of California-Berkeley, 2008

John P Stark, Professor Emeritus  
Department of Mechanical Engineering  
PhD, University of Oklahoma Norman Campus, 1963

Hugo Steinfink, Professor Emeritus  
Department of Chemical Engineering  
PhD, Polytechnic University, 1954

Karl D Stephan, Adjunct Associate Professor  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1983

Morris Stern, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Illinois at Urbana-Champaign, 1962

James E Stice, Professor Emeritus  
Department of Chemical Engineering  
PhD, Illinois Institute of Technology, 1963

Kenneth H Stokoe, Professor  
Jennie C. and Milton T. Graves Chair in Engineering  
Department of Civil, Architectural, and Environmental Engineering

PhD, University of Michigan-Ann Arbor, 1972

Ben G Streetman, Professor Emeritus  
Department of Electrical and Computer Engineering  
PhD, University of Texas at Austin, 1966

Laura J Suggs, Associate Professor  
Department of Biomedical Engineering  
PhD, Rice University, 1998

Nan Sun, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Harvard University, 2011

Eric J Swanson, Adjunct Professor  
Department of Electrical and Computer Engineering  
MSEE, California Institute of Technology, 1980

Earl E Swartzlander, Professor  
Department of Electrical and Computer Engineering  
PhD, University of Southern California, 1972

John S Swinnea, Lecturer  
Department of Chemical Engineering  
PhD, University of Texas at Austin, 1981

Eric M Taleff, Professor  
Department of Mechanical Engineering  
PhD, Stanford University, 1995

Byron D Tapley, Professor  
Clare Cockrell Williams Centennial Chair in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1960

John L Tassoulas, Professor  
Phil M. Ferguson Professorship in Civil Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Massachusetts Institute of Technology, 1981

Nina K Telang, Lecturer  
Department of Electrical and Computer Engineering  
PhD, University of Notre Dame, 1995

David W Terreson, Adjunct Associate Professor  
Department of Biomedical Engineering  
MD, University of Mississippi Medical Center, 1986

Delbert Tesar, Professor  
Carol Cockrell Curran Chair in Engineering  
Department of Mechanical Engineering  
PhD, Georgia Institute of Technology, 1964

Ahmed Hossam Tewfik, Professor  
Cockrell Family Regents Chair in Engineering #1  
Department of Electrical and Computer Engineering  
ScD, Massachusetts Institute of Technology, 1987

Stephen R Thomas, Research Associate Professor (Affiliated)  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1996

George B Thurston, Professor Emeritus  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1952

Charles E Tinney, Assistant Professor  
Department of Aerospace Engineering and Engineering Mechanics



PhD, Syracuse University Main Campus, 2005

Fulvio Tonon, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Colorado at Boulder, 2000

Carlos Torres-Verdin, Professor  
Zarrow Centennial Professorship in Petroleum Engineering  
Department of Petroleum and Geosystems Engineering  
PhD, University of California-Berkeley, 1991

Nur A Toubia, Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 1996

Thomas M Truskett, Professor  
Paul D. and Betty Robertson Meek Centennial Professorship in  
Chemical Engineering  
Department of Chemical Engineering  
PhD, Princeton University, 2001

Richard L Tucker, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1963

James W Tunnell, Associate Professor  
Department of Biomedical Engineering  
PhD, Rice University, 2002

Emanuel Tutuc, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Princeton University, 2004

Jonathan W Valvano, Professor  
Department of Electrical and Computer Engineering  
PhD, Massachusetts Institute of Technology, 1981

Eric Van Oort, Professor  
Department of Petroleum and Geosystems Engineering  
PhD, University of Amsterdam, 1990

Philip L Varghese, Professor  
Cockrell Family Chair for Departmental Leadership #2, Stanley P.  
Finch Centennial Professorship in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, Stanford University, 1983

Haris Vikalo, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2003

Sriram Vishwanath, Associate Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2004

T R Viswanathan, Research Professor (Affiliated)  
Department of Electrical and Computer Engineering  
PhD, University of Saskatchewan, 1964

Gary C Vliet, Professor Emeritus  
Department of Mechanical Engineering  
PhD, Stanford University, 1962

Randi G Voss, Lecturer  
Department of Biomedical Engineering  
PhD, University of Texas at Austin, 1995

Norman K Wagner, Associate Professor Emeritus

Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Hawaii at Manoa, 1966

Steven T Waller, Adjunct Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Northwestern University, 2000

Charles M Walton, Professor  
Ernest H. Cockrell Centennial Chair in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, North Carolina State University, 1971

Zheng Wang, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, Stanford University, 2006

Trevor J Watt, Lecturer  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 2011

Michael Webber, Assistant Professor  
Department of Mechanical Engineering  
PhD, Stanford University, 2001

Sunshine Webster, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 2009

Ashley J Welch, Professor Emeritus  
Department of Biomedical Engineering  
PhD, Rice University, 1964

William F Weldon, Professor Emeritus  
Department of Mechanical Engineering  
MS-ME, University of Texas at Austin, 1970

John C Westkaemper, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of Texas at Austin, 1967

Dan L Wheat, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Colorado State University, 1980

Harovel G Wheat, Associate Professor  
Department of Mechanical Engineering  
PhD, University of Texas at Austin, 1985

Mary F Wheeler, Professor  
Ernest and Virginia Cockrell Chair in Engineering  
Department of Aerospace Engineering and Engineering Mechanics  
Department of Petroleum and Geosystems Engineering  
PhD, Rice University, 1971

Max L Williams, Adjunct Professor  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, California Institute of Technology, 1950

Eric B Williamson, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1996

Carlton G Willson, Professor  
Rashid Engineering Regents Chair  
Department of Chemical Engineering  
PhD, University of California-Berkeley, 1974

Preston S Wilson, Associate Professor

Department of Mechanical Engineering  
PhD, Boston University, 2002

Brian C Winkelmann, Lecturer  
Department of Aerospace Engineering and Engineering Mechanics  
MSE, University of Texas at Austin, 1997

Eugene H Wissler, Professor Emeritus  
Department of Chemical Engineering  
PhD, University of Minnesota-Twin Cities, 1955

Billy H Wood, Senior Lecturer  
Department of Mechanical Engineering  
MArch, Texas A & M University, 1977

Kristin L Wood, Professor  
Cullen Trust for Higher Education Endowed Professorship in  
Engineering #1  
Department of Mechanical Engineering  
PhD, California Institute of Technology, 1989

Sharon L Wood, Professor  
Cockrell Family Chair for Departmental Leadership #3, Robert L.  
Parker, Sr. Centennial Professorship in Engineering  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 1986

Charles M Woodruff, Senior Lecturer  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1973

Herbert H Woodson, Professor Emeritus  
Department of Electrical and Computer Engineering  
DSc, Massachusetts Institute of Technology, 1956

Stephen G Wright, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1969

Ying Xu, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, Virginia Polytechnic Institute and State University, 2009

Ramesh Yerraballi, Senior Lecturer  
Department of Electrical and Computer Engineering  
Department of Biomedical Engineering  
PhD, Old Dominion University, 1996

Ching-Hsie Yew, Professor Emeritus  
Department of Aerospace Engineering and Engineering Mechanics  
PhD, University of California-Berkeley, 1962

Yetkin Yildirim, Research Assistant Professor (Affiliated)  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 2000

Ali E Yilmaz, Assistant Professor  
Department of Electrical and Computer Engineering  
PhD, University of Illinois at Urbana-Champaign, 2005

Edward T Yu, Professor  
Judson S. Swearingen Regents Chair in Engineering  
Department of Electrical and Computer Engineering  
PhD, California Institute of Technology, 1991

Joseph A Yura, Professor Emeritus  
Department of Civil, Architectural, and Environmental Engineering

PhD, Lehigh University, 1965

Muhammad H Zaman, Adjunct Assistant Professor  
Department of Biomedical Engineering  
PhD, University of Chicago, 2003

Xiaojing Zhang, Associate Professor  
Department of Biomedical Engineering  
PhD, Stanford University, 2004

Zhanmin Zhang, Associate Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Texas at Austin, 1996

Jianshi Zhou, Research Professor (Affiliated)  
Department of Mechanical Engineering  
PhD, Jilin University, 1991

Jinying Zhu, Assistant Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of Illinois at Urbana-Champaign, 2006

Jorge G Zornberg, Professor  
Department of Civil, Architectural, and Environmental Engineering  
PhD, University of California-Berkeley, 1994

## College of Fine Arts Faculty

Lee E Abraham, Associate Professor  
Department of Theatre and Dance  
MFA, California Institute of the Arts, 1977

Christopher O Adejumo, Associate Professor  
Department of Art and Art History  
PhD, Ohio State U Main Campus, 1997

Amrita P Adhikary, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2011

Shirley M Alexander, Professor Emeritus  
Department of Art and Art History  
PhD, New York University, 1967

Gregory D Allen, Professor  
Sarah and Ernest Butler School of Music  
MM, Peabody Institute of Johns Hopkins University, 1972

Byron P Almen, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, Indiana University at Bloomington, 1998

Anthony Alofsin, Professor  
Roland Gommel Roessner Centennial Professorship in Architecture  
Department of Art and Art History  
PhD, Columbia University in the City of New York, 1987

Megan Alrutz, Assistant Professor  
Department of Theatre and Dance  
PhD, Arizona State University Main, 2004

Charles Odell Anderson, Associate Professor  
Department of Theatre and Dance  
MFA, Temple University, 2002

Elliott M Antokoletz, Professor  
Sarah and Ernest Butler School of Music  
PhD, City University of New York Graduate Center, 1975

Christina Bain, Associate Professor  
Department of Art and Art History  
PhD, University of Georgia, 2001

Charles K Ball, Specialist  
Sarah and Ernest Butler School of Music  
BA, Maryville College, 1972

Rebecca A Baltzer, Professor Emeritus  
Sarah and Ernest Butler School of Music  
PhD, Boston University, 1974

Jacqueline E Barnitz, Professor Emeritus  
Department of Art and Art History  
PhD, City University of New York Graduate Center, 1986

Jean J Barrera, Specialist  
Sarah and Ernest Butler School of Music  
HS/GED, , 1970

Michelle E Bayer, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2006

Andrea P Beckham, Senior Lecturer  
Department of Theatre and Dance  
BA, University of Texas at Austin, 1986

William Bloodgood, Lecturer  
Department of Theatre and Dance  
MFA, Penn State University Park, 1990

Robert Michael Boland, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2007

Paul E Bolin, Professor  
Department of Art and Art History  
PhD, University of Oregon, 1986

Paul A Bonin, Assistant Professor  
Department of Theatre and Dance  
PhD, University of Texas at Austin, 2006

Troy D Brauntuch, Professor  
Department of Art and Art History  
BFA, California Institute of the Arts, 1975

Nathaniel O Brickens, Professor  
Sarah and Ernest Butler School of Music  
DMA, University of Texas at Austin, 1989

John W Brokaw, Professor Emeritus  
Department of Theatre and Dance  
PhD, Indiana University at Bloomington, 1970

Rebecca L Brooks, Professor Emeritus  
Department of Art and Art History  
PhD, University of Texas at Austin, 1974

Steven L Bryant, Associate Professor  
Sarah and Ernest Butler School of Music  
MM, Wichita State University, 1971

James W Buhler, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, University of Pennsylvania, 1996

Thomas A Burritt, Associate Professor  
Sarah and Ernest Butler School of Music  
DMA, Northwestern University, 2000

William S Bussey, Lecturer  
Department of Theatre and Dance  
BFA, University of Wisconsin-Milwaukee, 1983

Lorenzo F Candelaria, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, Yale University, 2001

Charlotte Canning, Professor  
Frank C. Erwin, Jr. Centennial Professorship in Drama  
Department of Theatre and Dance  
PhD, University of Washington - Seattle, 1991

Sarah A Canright, Senior Lecturer  
Department of Art and Art History  
BFA, School of the Art Institute of Chicago, 1964

Annette D Carlozzi, Senior Lecturer  
Department of Art and Art History  
BA, Brandeis University, 1975

Andrew I Carlson, Lecturer  
Department of Theatre and Dance  
PhD, University of Illinois at Urbana-Champaign, 2011

Robert M Carnochan, Associate Professor  
Sarah and Ernest Butler School of Music  
DMA, University of Texas at Austin, 1999

Laquetta L Carpenter, Lecturer  
Department of Theatre and Dance  
MFA, Pennsylvania State University Park, 2007

Charles Daniel Carson, Assistant Professor  
Sarah and Ernest Butler School of Music  
PhD, University of Pennsylvania, 2008

Ezekiel R Castro, Lecturer  
Sarah and Ernest Butler School of Music  
BM, University of Texas at Austin, 1961

Kate Catterall, Associate Professor  
Department of Art and Art History  
MA, Glasgow School of Art, 1992

Edward Chambers, Assistant Professor  
Department of Art and Art History  
PhD, University of London, 1998

B G Chandler, Professor  
Florence Thelma Hall Centennial Chair in Music  
Sarah and Ernest Butler School of Music  
PhD, Indiana University at Bloomington, 1975

Michael R Charles, Professor  
Department of Art and Art History  
MFA, University of Houston, 1993

Michael J Charlesworth, Professor  
Department of Art and Art History

PhD, The University of Kent, 1990

Lee R Chesney, Associate Professor  
Department of Art and Art History  
MFA, Indiana University at Bloomington, 1972

Elizabeth J Chiles, Lecturer  
Department of Art and Art History  
MFA, San Francisco Art Institute, 2005

Daniel Ching, Senior Lecturer  
Sarah and Ernest Butler School of Music  
MMus, Cleveland Institute of Music, 1998

Pamela D Christian, Associate Professor  
Department of Theatre and Dance  
PhD, Southern Illinois University., 2000

John R Clarke, Professor  
Annie Laurie Howard Regents Professorship in Fine Arts  
Department of Art and Art History  
PhD, Yale University, 1973

Rusty Cloyes, Lecturer  
Department of Theatre and Dance  
MFA, University of Texas at Austin, 2005

Thelma R Coles, Professor  
Department of Art and Art History  
MA, San Diego State University, 1978

Barbara Conrad, Visiting Professor  
Sarah and Ernest Butler School of Music  
BMus, University of Texas at Austin, 1959

Eugenia Costa-Giomi, Professor  
Sarah and Ernest Butler School of Music  
PhD, Ohio State U Main Campus, 1991

Paula A Crider, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MM, University of Texas at Austin, 1970

Raymond D Crisara, Professor Emeritus  
Sarah and Ernest Butler School of Music  
HS/GED, , 1936

Jeremy L Cudd, Lecturer  
Department of Theatre and Dance  
MFA, Pennsylvania State University Park, 2007

Tina Marie Curran, Assistant Professor  
Department of Theatre and Dance  
PhD, New York University, 2010

Stephen J Daly, Professor Emeritus  
Department of Art and Art History  
MFA, Cranbrook Academy of Art, 1967

Neal A Daugherty, Lecturer  
Department of Art and Art History  
MFA, Louisiana State University and Agricultural and Mechanical  
College, 1996

Penelope J Davies, Associate Professor  
Department of Art and Art History  
PhD, Yale University, 1994

Scott Davis, Lecturer  
Sarah and Ernest Butler School of Music

Natalie A Davison, Lecturer  
Department of Theatre and Dance  
BA, Georgia State University, 1993

Kathryn M Dawson, Lecturer  
Department of Theatre and Dance  
Department of Theatre and Dance  
MFA, University of Texas at Austin, 2006

Andrew F Dell'Antonio, Professor  
Sarah and Ernest Butler School of Music  
PhD, University of California-Berkeley, 1991

Douglas J Dempster, Professor  
Effie Marie Cain Regents Chair in Fine Arts, The Marie and Joseph D.  
Jamaill, Sr. Regents Professorship in Fine Arts  
Department of Theatre and Dance  
PhD, University of North Carolina at Chapel Hill, 1983

Robert A Desimone, Professor  
Sarah and Ernest Butler Professorship in Opera  
Sarah and Ernest Butler School of Music  
DMA, University of Washington - Seattle, 1981

Hanns-Bertold Dietz, Professor Emeritus  
Sarah and Ernest Butler School of Music  
PhD, University of Innsbruck, 1956

Steven Dietz, Professor  
Department of Theatre and Dance  
BA, University of Northern Colorado, 1980

Charles A Dillard, Lecturer  
Sarah and Ernest Butler School of Music  
DMA, University of Colorado at Boulder, 2008

Vincent R Dinino, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MS, Nd State U Main Campus, 1955

Franchelle Dorn, Professor  
Virginia L. Murchison Regents Professorship in Fine Arts  
Department of Theatre and Dance  
MFA, Yale University, 1975

Dennis W Dotson, Specialist  
Sarah and Ernest Butler School of Music  
HS/GED, , 1963

Lucien Douglas, Associate Professor  
Department of Theatre and Dance  
PhD, Michigan State University, East Lansing, 1996

Eric A Drott, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, Yale University, 2001

Thomas A Druecker, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 1993

Robert A Duke, Professor  
Marlene and Morton Meyerson Centennial Professorship in Music  
Sarah and Ernest Butler School of Music



PhD, Florida State University, 1983

William A Edwards, Specialist  
Sarah and Ernest Butler School of Music  
MM, University of Texas at Austin, 1989

Jeff W Ellinger, Lecturer  
Department of Theatre and Dance  
BA, University of Texas at Austin, 1977

Bernard B Engel, Professor Emeritus  
Department of Theatre and Dance  
PhD, University of Pittsburgh, Pittsburgh Campus, 1967

Anne E Epperson, Professor  
Priscilla Pond Flawn Regents Professorship in Organ or Piano  
Performance  
Sarah and Ernest Butler School of Music  
MM, Louisiana State University and Agricultural and Mechanical  
College, 1975

Veit F Erlmann, Professor  
History of Music Chair  
Sarah and Ernest Butler School of Music  
PhD, Foreign Institution, 1978

Jonathan J Faber, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2003

Edward Z Fair, Lecturer  
Sarah and Ernest Butler School of Music  
JD, University of Texas at Austin, 1985

William A Fedkenheuer, Senior Lecturer  
Sarah and Ernest Butler School of Music  
BM, Rice University, 1998

Delaine Fedson, Senior Lecturer  
Sarah and Ernest Butler School of Music  
MMus, University of Texas at Austin, 1984

Sandra Fernandez, Assistant Professor  
Department of Art and Art History  
MFA, University of Wisconsin-Madison, 1995

Kenneth B Fiske, Professor Emeritus  
Department of Art and Art History  
MA, University of Southern California, 1952

George F Flaherty, Assistant Professor  
Department of Art and Art History  
PhD, University of California-Santa Barbara, 2010

Robert Freeman, Professor  
Sarah and Ernest Butler School of Music  
PhD, Princeton University, 1967

John M Fremgen, Associate Professor  
Sarah and Ernest Butler School of Music  
MMus, University of Southern California, 1993

George A Frock, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MME, University of Kansas Main Campus, 1963

Nancy B Garrett, Professor  
Sarah and Ernest Butler School of Music

MM, University of Texas at Austin, 1966

Marianne Gedigian, Professor  
Sarah and Ernest Butler Professorship in Music  
Sarah and Ernest Butler School of Music  
BM, Boston University, 1986

Stephen T Gerald, Associate Professor  
Department of Theatre and Dance  
MFA, Rutgers the State University of New Jersey Camden Campus,  
1977

Sophia Gilmsen, Associate Professor  
Sarah and Ernest Butler School of Music  
MM, Foreign Institution, 1973

Joshua T Gindele, Senior Lecturer  
Sarah and Ernest Butler School of Music  
BMus, The Juilliard School, 2000

Andrea Giunta, Professor  
Chair in Latin American Art History and Criticism  
Department of Art and Art History  
PhD, University of Buenos Aires, 1999

James J Glavan, Professor  
David Bruton, Jr. Regents Professorship in Fine Arts  
Department of Theatre and Dance  
MA, Kent State University Main Campus, 1984

Mark K Goodman, Professor  
Department of Art and Art History  
BA, Boston University, 1970

Donald J Grantham, Professor  
Frank C. Erwin, Jr. Centennial Professorship in Music  
Sarah and Ernest Butler School of Music  
DMA, University of Southern California, 1980

Eugene A Gratovich, Associate Professor  
Sarah and Ernest Butler School of Music  
DMA, Boston University, 1968

Sue S Graze, Lecturer  
Department of Art and Art History  
BA, University of Wisconsin Colleges, 1970

Terence Grieder, Professor Emeritus  
Department of Art and Art History  
PhD, University of Pennsylvania, 1961

John W Grubbs, Associate Professor Emeritus  
Sarah and Ernest Butler School of Music  
PhD, University of California-Los Angeles, 1972

Julia E Guernsey, Associate Professor  
Department of Art and Art History  
PhD, University of Texas at Austin, 1997

Lita A Guerra, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MM, University of Texas at Austin, 1959

Joel J Guzman, Specialist  
Sarah and Ernest Butler School of Music  
HS/GED, , 1974

Michelle Habeck, Associate Professor

Department of Theatre and Dance  
MFA, Northwestern University, 1996

Kenneth J Hale, Professor  
Marguerite Fairchild Centennial Professorship  
Department of Art and Art History  
MFA, University of Illinois at Urbana-Champaign, 1973

Peter Alec Hall, Senior Lecturer  
Department of Art and Art History  
BA, University of Hull, 1986

Kara K Hallmark, Lecturer  
Department of Art and Art History  
PhD, Florida State University, 2007

Barney Hammond, Associate Professor  
Department of Theatre and Dance  
MA, University of Houston, 1977

Judith E Hancock, Senior Lecturer  
Sarah and Ernest Butler School of Music  
MA, Union Theological Seminary, 1961

Scott S Hanna, Lecturer  
Sarah and Ernest Butler School of Music  
DMA, University of Texas at Austin, 1999

Paul P Hatgil, Professor Emeritus  
Department of Art and Art History  
MA, Columbia University in the City of New York, 1951

Robert S Hatten, Professor  
Sarah and Ernest Butler School of Music  
PhD, Indiana University at Bloomington, 1982

Jeffrey L Hellmer, Professor  
Sarah and Ernest Butler School of Music  
MM, University of Rochester, 1983

Linda D Henderson, Professor  
David Bruton, Jr. Centennial Professorship in Art History  
Department of Art and Art History  
PhD, Yale University, 1975

Rebecca Henderson, Professor  
Sarah and Ernest Butler School of Music  
MM, University of Rochester, 1986

Jacqueline C Henninger, Assistant Professor  
Sarah and Ernest Butler School of Music  
PhD, University of Texas at Austin, 2000

Donald D Herron, Associate Professor  
Department of Art and Art History  
MFA, Tulane University, 1973

John H Hicks, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MM, Boston University, 1951

Timothy G High, Associate Professor  
Department of Art and Art History  
MFA, University of Wisconsin-Madison, 1976

Martha F Hilley, Professor  
Sarah and Ernest Butler School of Music

MA, Sam Houston State University, 1971

Joan A Holladay, Professor  
Department of Art and Art History  
PhD, Brown University, 1982

Grace M Holmes, Lecturer  
Department of Theatre and Dance  
MA, University of Birmingham, 2000

Adam Holzman, Professor  
Parker C. Fielder Regents Professorship in Music  
Sarah and Ernest Butler School of Music  
MM, Florida State University, 1984

Teresa Hubbard, Professor  
Department of Art and Art History  
MFA, Nova Scotia College of Art and Design, 1992

Patrick Hughes, Associate Professor  
Sarah and Ernest Butler School of Music  
MMus, University of Wisconsin-Madison, 1988

David C Hunter, Senior Lecturer  
Sarah and Ernest Butler School of Music  
PhD, University of Illinois at Urbana-Champaign, 1989

Richard M Isackes, Professor  
Joanne Sharp Crosby Regents Chair in Design and Technology  
Department of Theatre and Dance  
MFA, Carnegie Mellon University, 1975

Judith A Jellison, Professor  
Mary D. Bold Regents Professorship of Music  
Sarah and Ernest Butler School of Music  
PhD, Florida State University, 1972

Coleman A Jennings, Professor  
Jesse H. Jones Regents Professorship in Fine Arts  
Department of Theatre and Dance  
EdD, New York University, 1974

Kristin W Jensen, Professor  
Sarah and Ernest Butler School of Music  
MM, The Juilliard School, 1991

Ann C Johns, Senior Lecturer  
Department of Art and Art History  
PhD, University of Texas at Austin, 2000

Leonard A Johnson, Associate Professor  
Sarah and Ernest Butler School of Music  
MA, San Diego State University, 1968

Jules Buck Jones, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2008

Kimberly L Jones, Lecturer  
Department of Art and Art History  
PhD, University of Texas at Austin, 2010

Sheryl L Jones, Lecturer  
Sarah and Ernest Butler School of Music  
MMusEd, Texas State University-San Marcos, 1978

Richard M Jordan, Associate Professor  
Department of Art and Art History

MFA, Syracuse University Main Campus, 1964

Jerry F Junkin, Professor  
Sarah and Ernest Butler School of Music  
MMus, University of Texas at Austin, 1979

David Justin, Associate Professor  
Department of Theatre and Dance  
MA, University of Birmingham, 2000

Scott Kanoff, Lecturer  
Department of Theatre and Dance  
BA, University of Pennsylvania, 1974

Barna Kantor, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2005

Janet E Kastner, Associate Professor Emeritus  
Department of Art and Art History  
MFA, Alfred University, 1979

Donald L Knaub, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MM, Foreign Institution, 1961

K M Knittel, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, Princeton University, 1992

Nancy Kylyn Koenning, Lecturer  
Department of Theatre and Dance  
MM, University of Texas at Austin, 1983

Karl Korte, Professor Emeritus  
Sarah and Ernest Butler School of Music

Stefan M Kostka, Professor Emeritus  
Sarah and Ernest Butler School of Music  
PhD, University of Wisconsin-Madison, 1969

Kelly Kuo, Lecturer  
Sarah and Ernest Butler School of Music  
MM, Manhattan School of Music, 1998

Darien V Lamien, Lecturer  
Sarah and Ernest Butler School of Music  
PhD, University of Pennsylvania, 2011

John C Largess, Senior Lecturer  
Sarah and Ernest Butler School of Music  
BA, Yale University, 1995

Joan Lazarus, Associate Professor  
Department of Theatre and Dance  
MFA, Arizona State University Main, 1982

Gloria J Lee, Associate Professor  
Department of Art and Art History  
MFA, Yale University, 1991

Leonard Lehrer, Visiting Professor  
Department of Art and Art History  
MFA, University of Pennsylvania, 1960

Janice Leoshko, Associate Professor  
Department of Art and Art History

PhD, Ohio State U Main Campus, 1987

Brian D Lewis, Professor  
David and Mary Winton Green Chair in String Performance and  
Pedagogy  
Sarah and Ernest Butler School of Music  
MM, The Juilliard School, 1993

William L Lewis, Professor  
Frank C. Erwin, Jr. Centennial Professorship in Opera  
Sarah and Ernest Butler School of Music  
BM, Texas Christian University, 1967

Beili Liu, Associate Professor  
Department of Art and Art History  
MFA, University of Michigan-Ann Arbor, 2003

Sondra Lomax, Lecturer  
Department of Theatre and Dance  
MFA, York College, 1979

James R Lowe, Assistant Professor  
Sarah and Ernest Butler School of Music  
MM, University of Michigan-Ann Arbor, 1991

Allison Elizabeth Lowery, Lecturer  
Department of Theatre and Dance  
MFA, North Carolina School of the Arts, 1999

Amarante L Lucero, Professor  
Department of Theatre and Dance  
MFA, Southern Methodist University, 1976

William A Lundberg, Professor Emeritus  
Department of Art and Art History  
MA, University of California-Berkeley, 1965

Ana V Luperi, Lecturer  
Sarah and Ernest Butler School of Music  
BM, Curtis Institute of Music, 2002

Kirk E Lynn, Lecturer  
Department of Theatre and Dance  
MFA, University of Texas at Austin, 2004

Betty P Mallard, Associate Professor Emeritus  
Sarah and Ernest Butler School of Music  
DMA, University of Texas at Austin, 1979

Karen L Maness, Lecturer  
Department of Theatre and Dance  
BA, Whittier College, 1995

Hunter C March, Professor  
Sarah and Ernest Butler School of Music  
PhD, University of Michigan-Ann Arbor, 1980

Vincent A Mariani, Professor Emeritus  
Department of Art and Art History  
BFA, Yale University, 1959

Anthony Charles Marinello, Lecturer  
Sarah and Ernest Butler School of Music  
MM, University of Cincinnati Main Campus, 2006

Denise V Martel, Senior Lecturer  
Department of Theatre and Dance

MFA, University of Illinois at Urbana-Champaign, 1989

Richard J Masters, Lecturer  
Sarah and Ernest Butler School of Music  
DMA, University of Rochester, 2010

Melinda Marilyn Mayer, Assistant Professor  
Department of Art and Art History  
PhD, Penn State University Park, 1999

Lawrence D McFarland, Professor  
William and Bettye Nowlin Endowed Professorship in Photography  
Department of Art and Art History  
MFA, University of Nebraska - Lincoln, 1976

Margaret Michelle Meehan, Lecturer  
Department of Art and Art History  
MFA, University of Washington - Seattle, 1999

Jeffrey L Meikle, Professor  
Stiles Professorship in American Studies  
Department of Art and Art History  
PhD, University of Texas at Austin, 1977

Susan E Mickey, Professor  
Department of Theatre and Dance  
MFA, The University of Alabama, 1979

Karl H Miller, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, New York University, 2002

Melissa W Miller, Associate Professor Emeritus  
Department of Art and Art History  
BA, New Mexico State University Main Campus, 1974

John R Mills, Associate Professor  
Sarah and Ernest Butler School of Music  
DMA, University of Texas at Austin, 1998

Michael J Mogavero, Associate Professor  
Department of Art and Art History  
MFA, Maryland Institute College of Art, 1975

Robin D Moore, Professor  
Sarah and Ernest Butler School of Music  
PhD, University of Texas at Austin, 1995

Cynthia C Morrow, Lecturer  
Sarah and Ernest Butler School of Music  
DMA, Ohio State U Main Campus, 1989

James M Morrow, Associate Professor  
Sarah and Ernest Butler School of Music  
DMA, University of Texas at Austin, 1996

Stephennie Mulder, Assistant Professor  
Department of Art and Art History  
PhD, University of Pennsylvania, 2008

Nayla Muntasser, Lecturer  
Department of Art and Art History  
PhD, University of Texas at Austin, 2003

Leslie A Mutchler, Assistant Professor  
Department of Art and Art History  
MFA, Temple University, 2004

Roger E Myers, Professor  
Sarah and Ernest Butler School of Music  
MM, University of Southern California, 1992

David A Nancarrow, Professor Emeritus  
Department of Theatre and Dance  
PhD, Foreign Institution, 1975

Luisa Nardini, Assistant Professor  
Sarah and Ernest Butler School of Music  
PhD, Università degli Studi di Roma "La Sapienza", 2001

Anton Nel, Professor  
Joe R. & Teresa Lozano Long Chair in Piano  
Sarah and Ernest Butler School of Music  
MMus, University of Cincinnati Main Campus, 1984

David P Neumeyer, Professor  
Leslie Waggener Professorship in the College of Fine Arts  
Sarah and Ernest Butler School of Music  
PhD, Yale University, 1976

Caroline P O'Meara, Assistant Professor  
Sarah and Ernest Butler School of Music  
PhD, University of California-Los Angeles, 2006

Wura-Natasha A Ogunji, Lecturer  
Department of Art and Art History  
MFA, San Jose State University, 1998

Moyosore Benjamin Okediji, Associate Professor  
Department of Art and Art History  
PhD, University of Wisconsin Colleges, 1995

Paul Olefsky, Professor Emeritus  
Sarah and Ernest Butler School of Music  
Diploma (Artist), Curtis Institute of Music, 1947

Guido Olivieri, Lecturer  
Sarah and Ernest Butler School of Music  
PhD, University of California-Santa Barbara, 2005

Daniel M Olsen, Associate Professor  
Department of Art and Art History  
MFA, Cranbrook Academy of Art, 1990

Francie Ostrower, Professor  
Department of Theatre and Dance  
PhD, Yale University, 1991

Ray Charles Otte, Associate Professor  
Department of Theatre and Dance  
MFA, University of Southern California, 1995

Amy C Papalexandrou, Lecturer  
Department of Art and Art History  
PhD, Princeton University, 1998

Athanasio Papalexandrou, Associate Professor  
Department of Art and Art History  
PhD, Princeton University, 1998

Gordon B Peacock, Professor Emeritus  
Department of Theatre and Dance  
LLD, Carnegie Mellon University, 1990

Edward R Pearsall, Associate Professor  
Sarah and Ernest Butler School of Music



PhD, University of Wisconsin-Madison, 1994

Glenn A Peers, Professor  
Department of Art and Art History  
PhD, Johns Hopkins University, 1996

Suzanne M Pence, Associate Professor  
Sarah and Ernest Butler School of Music  
DMA, University of Missouri - Kansas City, 1992

Bruce W Pennycook, Professor  
Sarah and Ernest Butler School of Music  
DMA, Stanford University, 1978

Bogdan P Perzynski, Professor  
Department of Art and Art History  
MFA, Poznan Academy of Fine Arts, 1979

Bradley R Petersen, Associate Professor  
Department of Art and Art History  
MFA, University of Georgia, 1975

Russell F Pinkston, Professor  
Sarah and Ernest Butler School of Music  
DMA, Columbia University in the City of New York, 1984

Harvey C Pittel, Professor  
Sarah and Ernest Butler School of Music  
MM, Northwestern University, 1967

Barbara M Pope, Senior Lecturer  
Department of Theatre and Dance  
MA, University of Connecticut, 1980

Brant Pope, Professor  
Z. T. Scott Family Chair in Drama  
Department of Theatre and Dance  
PhD, Michigan State University, East Lansing, 2003

Kenneth W Prescott, Professor Emeritus  
Department of Art and Art History  
PhD, University of Michigan-Ann Arbor, 1950

Brenda I Preyer, Professor Emeritus  
Department of Art and Art History  
PhD, Harvard University, 1976

Risa A Puleo, Lecturer  
Department of Art and Art History  
MA, Bard College, 2006

Rasito Rasito, Specialist  
Sarah and Ernest Butler School of Music  
None, ,

Susan W Rather, Associate Professor  
Department of Art and Art History  
PhD, University of Delaware, 1986

A D Renner, Associate Professor  
Sarah and Ernest Butler School of Music  
MM, University of Rochester, 1965

Ann M Reynolds, Associate Professor  
Department of Art and Art History  
PhD, City University of New York Graduate Center, 1993

Clark W Reynolds, Lecturer

Sarah and Ernest Butler School of Music  
PhD, Indiana University at Bloomington, 2000

Glenn A Richter, Professor  
Sarah and Ernest Butler School of Music  
MM, University of Texas at Austin, 1975

Edwin L Rifkin, Professor  
Department of Art and Art History  
PhD, University of Michigan-Ann Arbor, 1977

Andrew M Riggsby, Professor  
Department of Art and Art History  
PhD, University of California-Berkeley, 1993

Patricia M Risser, Lecturer  
Department of Theatre and Dance  
BFA, Western Illinois University, 1975

Charles A Roeckle, Senior Lecturer  
Sarah and Ernest Butler School of Music  
PhD, University of Texas at Austin, 1978

Rebecca Rossen Pavkovic, Assistant Professor  
Department of Theatre and Dance  
PhD, Northwestern University, 2006

Rick E Rowley, Senior Lecturer  
Sarah and Ernest Butler School of Music  
HS/GED, , 1973

Wayne W Salzmann, Specialist  
Sarah and Ernest Butler School of Music  
MM, University of Texas at Austin, 2010

Alejandro Sanchez, Lecturer  
Department of Art and Art History  
MFA, University of Texas at Austin, 2011

Ray K Sasaki, Professor  
Frank C. Erwin, Jr. Centennial Professorship in Fine Arts  
Sarah and Ernest Butler School of Music  
MMus, University of North Texas, 1975

Peter A Saul, Professor Emeritus  
Department of Art and Art History  
BFA, Washington University in St Louis, 1956

Margo L Sawyer, Professor  
Department of Art and Art History  
MFA, Yale University, 1982

D Schmandt-Besserat, Professor Emeritus  
Department of Art and Art History  
MA, Ecole Du Louvre, 1965

Robert N Schmidt, Professor Emeritus  
Department of Theatre and Dance  
MFA, University of Wisconsin-Madison, 1979

Roxanne Schroeder, Assistant Professor  
Department of Theatre and Dance  
MFA, University of Texas at Austin, 2000

Sonia T Seeman, Assistant Professor  
Sarah and Ernest Butler School of Music  
PhD, University of California-Los Angeles, 2002

YunChiahn C Sena, Assistant Professor  
 Department of Art and Art History  
 PhD, University of Chicago, 2007

Yacov Sharir, Professor  
 Department of Theatre and Dance  
 BFA, Bezalel Academy of Art & Design, 1966

Yevgeniy Sharlat, Assistant Professor  
 Sarah and Ernest Butler School of Music  
 MM, Yale University, 2004

David Shields, Associate Professor  
 Department of Art and Art History  
 MFA, Cranbrook Academy of Art, 1994

Richard A Shiff, Professor  
 Effie Marie Cain Regents Chair in Art  
 Department of Art and Art History  
 PhD, Yale University, 1973

Stephen M Slawek, Professor  
 Sarah and Ernest Butler School of Music  
 PhD, University of Illinois at Urbana-Champaign, 1986

David A Small, Associate Professor  
 Sarah and Ernest Butler School of Music  
 MM, University of Cincinnati Main Campus, 1987

Cameron Smith, Lecturer  
 Sarah and Ernest Butler School of Music  
 BS, Ohio University Main Campus, 1988

Cherise Smith, Associate Professor  
 Department of Art and Art History  
 PhD, Stanford University, 2004

Jeffrey C Smith, Professor  
 Kay Fortson Chair in European Art  
 Department of Art and Art History  
 PhD, Columbia University in the City of New York, 1979

Michael Smith, Associate Professor  
 Department of Art and Art History  
 BA, Colorado College, 1974

Frank N Speller, Associate Professor Emeritus  
 Sarah and Ernest Butler School of Music  
 DMA, University of Colorado at Boulder, 1968

Jeffrey C Stanley, Lecturer  
 Department of Art and Art History  
 MFA, University of Texas at Austin, 2011

John S Stoney, Associate Professor  
 Department of Art and Art History  
 MFA, Cranbrook Academy of Art, 1998

Nikita Storojev, Associate Professor  
 Sarah and Ernest Butler School of Music  
 MFA, Moscow P.I. Tchaikovsky Conservatory, 1979

David S Stuart, Professor  
 Linda and David Schele Chair in the Art and Writing of Mesoamerica  
 Department of Art and Art History  
 PhD, Vanderbilt University, 1995

Daniel D Sutherland, Associate Professor  
 Department of Art and Art History  
 MFA, Syracuse University Main Campus, 1991

Rebecca Switzer, Lecturer  
 Department of Theatre and Dance  
 MFA, University of Arizona, 1987

Rose A Taylor, Professor  
 Sarah and Ernest Butler School of Music  
 BM, University of Southern California, 1968

Riley G Triggs, Lecturer  
 Department of Art and Art History  
 MArch, Rice University, 2006

Bion Tsang, Associate Professor  
 Sarah and Ernest Butler School of Music  
 MM, Yale University, 1993

Michael C Tusa, Professor  
 Sarah and Ernest Butler School of Music  
 PhD, Princeton University, 1983

Jarvis W Ulbricht, Professor Emeritus  
 Department of Art and Art History  
 PhD, University of Iowa, 1976

Jason Paul Urban, Lecturer  
 Department of Art and Art History  
 MFA, University of Iowa, 2002

Colette T Valentine, Lecturer  
 Sarah and Ernest Butler School of Music  
 DMA, State University of New York at Stony Brook, 2005

Theresa Veit, Lecturer  
 Department of Art and Art History  
 MFA, Rhode Island School of Design, 2005

Robert K Verf, Lecturer  
 Department of Art and Art History  
 BFA, Utrecht University, 1991

Charles W Villarrubia, Senior Lecturer  
 Sarah and Ernest Butler School of Music  
 MM, Boston University, 1988

James F Vollentine, Lecturer  
 Sarah and Ernest Butler School of Music  
 HS/GED, , 1990

Johnathon Vought, Lecturer  
 Department of Art and Art History  
 BFA, University of North Texas, 1996

Louis A Waldman, Associate Professor  
 Department of Art and Art History  
 PhD, New York University, 1999

Mitch Watkins, Specialist  
 Sarah and Ernest Butler School of Music  
 HS diploma, , 1970

Dan E Welcher, Professor  
 The Lee Hage Jamail Regents Professorship in Fine Arts  
 Sarah and Ernest Butler School of Music  
 MM, Manhattan School of Music, 1972

Marianne Wheeldon, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, Yale University, 1997

Susan D Whyne, Associate Professor  
Department of Art and Art History  
MA, University of San Francisco, 1974

Darlene C Wiley, Professor  
Sarah and Ernest Butler School of Music  
MM, University of Illinois at Urbana-Champaign, 1969

Holly A Williams, Professor  
Department of Theatre and Dance  
MFA, Texas Woman's University, 1994

Jeff Williams, Assistant Professor  
Department of Art and Art History  
MFA, Syracuse University Main Campus, 2002

Nathan L Williams, Assistant Professor  
Sarah and Ernest Butler School of Music  
DMA, The Juilliard School, 1992

Lyn C Wiltshire, Professor  
Department of Theatre and Dance  
, , 1969

Lewis R Wiman, Professor Emeritus  
Department of Art and Art History  
MFA, University of Florida, 1966

Satoko S Yamamoto, Senior Lecturer  
Sarah and Ernest Butler School of Music  
MMus, Cleveland Institute of Music, 1998

John A Yancey, Professor  
John D. Murchison Regents Professorship in Art  
Department of Art and Art History  
MFA, Georgia Southern University, 1993

Laurie S Young, Associate Professor  
Sarah and Ernest Butler School of Music  
PhD, University of Texas at Austin, 1987

Phyllis C Young, Professor Emeritus  
Sarah and Ernest Butler School of Music  
MM, University of Texas at Austin, 1950

Suzan L Zeder, Professor  
Theater for Youth Chair  
Department of Theatre and Dance  
PhD, Florida State University, 1978

Daxun Zhang, Assistant Professor  
Sarah and Ernest Butler School of Music  
BM, Indiana University at Bloomington, 2005

Gerhardt Zimmermann, Professor  
Jack G. Taylor Regents Professorship in Fine Arts  
Sarah and Ernest Butler School of Music  
MFA, University of Iowa, 1971

## John A. and Katherine G. Jackson School of Geosciences Faculty

Mead A Allison, Lecturer  
Department of Geological Sciences  
PhD, State University of New York at Stony Brook, 1993

Milo M Backus, Professor Emeritus  
Department of Geological Sciences  
PhD, Massachusetts Institute of Technology, 1956

Nathan L Bangs, Lecturer  
Department of Geological Sciences  
PhD, Columbia University in the City of New York, 1991

Jay L Banner, Professor  
Department of Geological Sciences  
PhD, State University of New York at Stony Brook, 1986

Daniel S Barker, Professor Emeritus  
Department of Geological Sciences  
PhD, Princeton University, 1961

Jaime D Barnes, Assistant Professor  
Department of Geological Sciences  
PhD, University of New Mexico Main Campus, 2006

Christopher J Bell, Professor  
Department of Geological Sciences  
PhD, University of California-Berkeley, 1997

Philip C Bennett, Professor  
Department of Geological Sciences  
PhD, Syracuse University Main Campus, 1989

Robert E Boyer, Professor Emeritus  
Department of Geological Sciences  
PhD, University of Michigan-Ann Arbor, 1959

Daniel O Breecker, Assistant Professor  
Department of Geological Sciences  
PhD, University of New Mexico Main Campus, 2008

Leonard F Brown, Professor Emeritus  
Department of Geological Sciences  
PhD, University of Wisconsin-Madison, 1955

Meinhard Bayani Cardenas, Associate Professor  
Department of Geological Sciences  
PhD, New Mexico Institute of Mining and Technology, 2006

William D Carlson, Professor  
Peter T. Flawn Centennial Chair in Geology  
Department of Geological Sciences  
PhD, University of California-Los Angeles, 1980

Ginny A Catania, Assistant Professor  
Department of Geological Sciences  
Institute for Geophysics  
PhD, University of Washington - Seattle, 2004

Elizabeth Jacqueline Catlos, Associate Professor  
Department of Geological Sciences

PhD, University of California-Los Angeles, 2000

Gail L Christeson, Lecturer  
Department of Geological Sciences  
PhD, Massachusetts Institute of Technology, 1993

Julia Allison Clarke, Associate Professor  
Department of Geological Sciences  
PhD, Yale University, 2002

Mark P Cloos, Professor  
Getty Oil Company Centennial Chair in Geological Sciences  
Department of Geological Sciences  
PhD, University of California-Los Angeles, 1981

Kerry Harrison Cook, Professor  
Department of Geological Sciences  
PhD, North Carolina State University, 1984

Ian W Dalziel, Professor  
Department of Geological Sciences  
PhD, University of Edinburgh, 1963

Robert Earl Dickinson, Professor  
Department of Geological Sciences  
PhD, Massachusetts Institute of Technology, 1966

Catherine S Duncan, Adjunct Assistant Professor  
Department of Geological Sciences  
PhD, University of Texas at Austin, 2001

Peter Eichhubl, Lecturer  
Edwin Allday Lectureship in Geological Sciences  
Department of Geological Sciences  
PhD, University of California-Santa Barbara, 1997

William L Fisher, Professor  
Leonidas T. Barrow Centennial Chair in Mineral Resources  
Department of Geological Sciences  
Bureau of Economic Geology  
PhD, University of Kansas Main Campus, 1980

Peter T Flawn, Professor Emeritus  
Department of Geological Sciences  
PhD, Yale University, 1951

Peter Barry Flemings, Professor  
John A. and Katherine G. Jackson Chair in Geosystems  
Department of Geological Sciences  
Bureau of Economic Geology  
Institute for Geophysics  
PhD, Cornell University, 1990

Robert L Folk, Professor Emeritus  
Department of Geological Sciences  
PhD, Pennsylvania State University Main Campus, 1952

Sergey B Fomel, Associate Professor  
Department of Geological Sciences  
PhD, Stanford University, 2001

Rong Fu, Professor  
Department of Geological Sciences  
PhD, Columbia University in the City of New York, 1991

William E Galloway, Professor Emeritus  
Department of Geological Sciences

PhD, University of Texas at Austin, 1971

James E Gardner, Professor  
Department of Geological Sciences  
PhD, University of Rhode Island, 1993

Marcus O Gary, Adjunct Assistant Professor  
Department of Geological Sciences  
PhD, University of Texas at Austin, 2009

Omar Nabih Ghattas, Professor  
John A. and Katherine G. Jackson Chair in Computational  
Geosciences  
Department of Geological Sciences  
PhD, Duke University, 1988

John A Goff, Lecturer  
Department of Geological Sciences  
PhD, Massachusetts Institute of Technology, 1990

Stephen P Grand, Professor  
Dave P. Carlton Centennial Professorship in Geophysics  
Department of Geological Sciences  
Institute for Geophysics  
PhD, California Institute of Technology, 1986

Charles G Groat, Professor  
John A. and Katherine G. Jackson Chair in Energy and Mineral  
Resources  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1970

Sean S Gulick, Lecturer  
Department of Geological Sciences  
PhD, Lehigh University, 2000

Nicholas W Hayman, Lecturer  
Department of Geological Sciences  
PhD, University of Washington - Seattle, 2003

Mark A Helper, Distinguished Senior Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1985

Marc Andre Hesse, Assistant Professor  
Department of Geological Sciences  
PhD, Stanford University, 2008

John W Holt, Lecturer  
Department of Geological Sciences  
PhD, California Institute of Technology, 1997

Brian K Horton, Associate Professor  
Department of Geological Sciences  
Institute for Geophysics  
PhD, University of Arizona, 1998

Susan D Hovorka, Lecturer  
Edwin Allday Lectureship in Geological Sciences  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1990

Charles S Jackson, Lecturer  
Department of Geological Sciences  
PhD, University of Chicago, 1998

Xavier Janson, Lecturer



Department of Geological Sciences  
PhD, University of Miami, 2002

Farzam Javadpour, Lecturer  
Department of Geological Sciences  
PhD, University of Calgary, 2006

Joel Peterson Johnson, Assistant Professor  
Department of Geological Sciences  
PhD, Massachusetts Institute of Technology, 2007

Edward C Jonas, Professor Emeritus  
Department of Geological Sciences  
PhD, University of Illinois at Urbana-Champaign, 1954

Charles Kerans, Professor  
Department of Geological Sciences  
Bureau of Economic Geology  
PhD, Carleton University, 1982

Richard A Ketcham, Associate Professor  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1995

Wonsuck Kim, Assistant Professor  
Department of Geological Sciences  
PhD, University of Minnesota-Twin Cities, 2007

Gary A Kocurek, Professor  
J. Nalle Gregory Chair in Sedimentary Geology  
Department of Geological Sciences  
PhD, University of Wisconsin-Madison, 1980

Charles W Kreitler, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1974

James R Kyle, Professor  
The Third Mr. and Mrs. Charles E. Yager Professorship  
Department of Geological Sciences  
Bureau of Economic Geology  
PhD, University of Western Ontario, 1977

Lynton S Land, Professor Emeritus  
Department of Geological Sciences  
PhD, Lehigh University, 1966

Wann Langston, Professor Emeritus  
Department of Geological Sciences  
PhD, University of California-Berkeley, 1952

John C Lassiter, Associate Professor  
Department of Geological Sciences  
PhD, University of California-Berkeley, 1995

Luc L Lavier, Assistant Professor  
Department of Geological Sciences  
Institute for Geophysics  
PhD, Columbia University in the City of New York, 1999

Jung-Fu Lin, Assistant Professor  
Department of Geological Sciences  
PhD, University of Chicago, 2002

Leon E Long, Professor  
The Second Mr. and Mrs. Charles E. Yager Professorship  
Department of Geological Sciences  
PhD, Columbia University in the City of New York, 1959

E L Lundelius, Professor Emeritus  
Department of Geological Sciences  
PhD, University of Chicago, 1954

Randall A Marrett, Professor  
Department of Geological Sciences  
Bureau of Economic Geology  
PhD, Cornell University, 1990

Arthur E Maxwell, Professor Emeritus  
Department of Geological Sciences  
PhD, University of California-San Diego, 1959

Earle F McBride, Professor Emeritus  
Department of Geological Sciences  
PhD, Johns Hopkins University, 1960

Kirk D McIntosh, Lecturer  
Department of Geological Sciences  
PhD, University of California-Santa Cruz, 1992

Timothy A Meckel, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Austin, 2003

Nathaniel Ross Miller, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Dallas, 1995

Kitty L Milliken, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1985

David Mohrig, Professor  
Department of Geological Sciences  
PhD, University of Washington - Seattle, 1994

Lorena G Moscardelli, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Austin, 2007

Sharon Mosher, Professor  
William Stamps Farish Chair in Geology, John A. and Katherine G. Jackson Decanal Chair in the Geosciences  
Department of Geological Sciences  
PhD, University of Illinois at Urbana-Champaign, 1978

Yosio Nakamura, Professor Emeritus  
Department of Geological Sciences  
Department of Geological Sciences  
PhD, Pennsylvania State University Main Campus, 1963

Jean P Nicot, Lecturer  
Edwin Allday Lectureship in Geological Sciences  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1998

Cornel Olariu, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Dallas, 2005

Hilary C Olson, Lecturer  
Department of Geological Sciences  
PhD, Stanford University, 1988

Jon E Olson, Associate Professor

Bureau of Economic Geology  
PhD, Stanford University, 1991

Christopher Ross Omelon, Lecturer  
Department of Geological Sciences  
PhD, University of Toronto, 2006

Raymond Lee Orbach, Professor  
Cockrell Family Chair in Engineering No. 12  
Department of Geological Sciences  
PhD, University of California-Berkeley, 1960

Jeffrey G Paine, Lecturer  
Department of Geological Sciences  
PhD, University of Texas at Austin, 1991

Suzanne A Pierce, Research Assistant Professor (Affiliated)  
Department of Geological Sciences  
PhD, University of Texas at Austin, 2006

Mary F Poteet, Lecturer  
Department of Geological Sciences  
PhD, University of California-Berkeley, 2001

David B Prior, Professor  
Department of Geological Sciences  
PhD, Queen's University, 1968

Terrence M Quinn, Professor  
Albert W. and Alice M. Weeks Centennial Professorship in Geological Sciences  
Department of Geological Sciences  
PhD, Brown University, 1989

Timothy B Rowe, Professor  
J. Nalle Gregory Regents Professorship in Geological Sciences  
Department of Geological Sciences  
PhD, University of California-Berkeley, 1986

Stephen C Ruppel, Lecturer  
Department of Geological Sciences  
PhD, University of Illinois at Urbana-Champaign, 1979

Joel Edward Saylor, Lecturer  
Department of Geological Sciences  
PhD, University of Arizona, 2008

Mrinal K Sen, Professor  
John A. and Katherine G. Jackson Chair in Applied Seismology  
Department of Geological Sciences  
Institute for Geophysics  
PhD, University of Hawaii at Manoa, 1987

Timothy Michael Shanahan, Assistant Professor  
Department of Geological Sciences  
PhD, University of Arizona, 2006

John M Sharp, Professor  
Dave P. Carlton Centennial Professorship in Geology  
Department of Geological Sciences  
PhD, University of Illinois at Urbana-Champaign, 1974

Douglas Smith, Professor Emeritus  
Department of Geological Sciences  
PhD, California Institute of Technology, 1969

Kyle Thomas Spikes, Assistant Professor

Department of Geological Sciences  
PhD, Stanford University, 2008

James T Sprinkle, Professor  
The First Mr. and Mrs. Charles E. Yager Professorship  
Department of Geological Sciences  
PhD, Harvard University, 1971

Ronald J Steel, Professor  
Morgan J. Davis Centennial Chair in Petroleum Geology  
Department of Geological Sciences  
PhD, University of Glasgow, 1972

Daniel Stockli, Professor  
Department of Geological Sciences  
PhD, Stanford University, 2000

Paul L Stoffa, Professor  
Shell Companies Foundation Distinguished Chair in Geophysics  
Department of Geological Sciences  
PhD, Columbia University in the City of New York, 1974

Robert H Tatham, Professor  
Shell Companies Foundation Centennial Chair in Geophysics  
Department of Geological Sciences  
PhD, Columbia University in the City of New York, 1975

Scott W Tinker, Professor  
Edwin Allday Centennial Chair in Subsurface Geology  
Department of Geological Sciences  
PhD, University of Colorado at Boulder, 1996

Edward K Vizey, Lecturer  
Department of Geological Sciences  
PhD, Cornell University, 2003

Clark R Wilson, Professor  
Wallace E. Pratt Professorship in Geophysics  
Department of Geological Sciences  
PhD, University of California-San Diego, 1975

Lesli J Wood, Lecturer  
Department of Geological Sciences  
PhD, Colorado State University, 1992

Zong-Liang Yang, Professor  
John A. and Katherine G. Jackson Chair in Earth System Sciences  
Department of Geological Sciences  
PhD, Macquarie University, 1992

Christopher K Zahm, Lecturer  
Department of Geological Sciences  
PhD, Colorado School of Mines, 2002

Donggao Zhao, Lecturer  
Department of Geological Sciences  
PhD, University of Michigan-Ann Arbor, 1998

## School of Information Faculty

Suellen S Adams, Adjunct Assistant Professor  
School of Information  
PhD, University of Texas at Austin, 2006

William L Anderson, Adjunct Assistant Professor

School of Information  
PhD, Rensselaer Polytechnic Institute, 1971

William Franklin Aspray, Professor  
Bill and Lewis Suit Professorship  
School of Information  
PhD, University of Wisconsin Colleges, 1980

Diane Elizabeth Bailey, Assistant Professor  
School of Information  
PhD, University of California-Berkeley, 1994

Lecia Jane Barker, Research Associate Professor (Affiliated)  
School of Information  
PhD, University of Colorado at Boulder, 1998

Randolph G Bias, Associate Professor  
School of Information  
PhD, University of Texas at Austin, 1978

Barbara Ann Bintliff, Professor  
School of Information  
JD, University of Washington - Seattle, 1978

John R Boisseau, Lecturer  
School of Information  
PhD, University of Texas at Austin, 1996

Claudia F Chidester, Adjunct Assistant Professor  
School of Information  
MLIS, University of Texas at Austin, 1986

Tanya Elizabeth Clement, Assistant Professor  
School of Information  
PhD, University of Maryland College Park, 2009

Veronica P Covington, Adjunct Assistant Professor  
School of Information  
PhD, Texas A & M University, 1996

Mary C Criner, Lecturer  
School of Information  
PhD, Louisiana State University and Agricultural and Mechanical  
College, 2000

Sarah H Cunningham, Lecturer  
School of Information  
MS, University of Texas at Austin, 2003

Donald G Davis, Professor Emeritus  
School of Information  
PhD, University of Illinois at Urbana-Champaign, 1972

Andrew P Dillon, Professor  
Louis T. Yule Regents Professorship in Library and Information  
Science  
School of Information  
PhD, Loughborough University, 1991

Philip Doty, Associate Professor  
School of Information  
PhD, Syracuse University Main Campus, 1995

Lori K Eichelberger, Lecturer  
School of Information  
MLIS, University of Texas at Austin, 1997

Rebecca K Elder, Adjunct Assistant Professor

School of Information  
MSLS, University of Texas at Austin, 2003

Nathan Ensmenger, Assistant Professor  
School of Information  
PhD, University of Pennsylvania, 2001

Melanie Diane Feinberg, Assistant Professor  
School of Information  
PhD, University of Washington - Seattle, 2008

Luis Francisco-Revilla, Assistant Professor  
School of Information  
PhD, Texas A & M University, 2004

Patricia K Galloway, Associate Professor  
School of Information  
PhD, University of North Carolina at Chapel Hill, 2004

David B Gracy, Professor Emeritus  
School of Information  
PhD, Texas Tech University, 1971

Stanley T Gunn, Adjunct Assistant Professor  
School of Information  
MLS, University of Texas at Austin, 1998

Julie Hallmark, Professor Emeritus  
School of Information  
PhD, University of Texas at Austin, 1973

Elmer G Harmon, Professor  
School of Information  
PhD, Case Western Reserve University, 1970

Lance A Hayden, Adjunct Assistant Professor  
School of Information  
PhD, University of Texas at Austin, 2009

Dorothy E Haynes, Adjunct Assistant Professor  
School of Information  
PhD, University of Texas at Austin, 1999

Fred M Heath, Professor  
School of Information  
EdD, Virginia Polytechnic Institute and State University, 1980

Margaret E Hermesmeyer, Adjunct Assistant Professor  
School of Information  
MLS, University of Texas at Austin, 1992

Billie G Herring, Professor Emeritus  
School of Information  
PhD, University of Texas at Austin, 1974

James L Howison, Assistant Professor  
School of Information  
PhD, Syracuse University Main Campus, 2009

Barbara F Immroth, Professor  
School of Information  
PhD, University of Pittsburgh, Pittsburgh Campus, 1980

William V Jackson, Professor Emeritus  
School of Information  
PhD, Harvard University, 1952

Unmil P Karadkar, Lecturer

School of Information  
School of Information  
PhD, Texas A & M University, 2011

Michael S Laird, Adjunct Assistant Professor  
School of Information  
MLIS, University of Texas at Austin, 1989

Matthew Alan Lease, Assistant Professor  
School of Information  
PhD, Brown University, 2009

Shirley H Lukenbill, Lecturer  
School of Information  
MS, Louisiana State University and Agricultural and Mechanical  
College, 1962

Willis B Lukenbill, Professor Emeritus  
School of Information  
PhD, Indiana University at Bloomington, 1973

Harry S Martin, Adjunct Professor  
School of Information  
JD, University of Minnesota-Twin Cities, 1968

Francis L Miksa, Professor Emeritus  
School of Information  
PhD, University of Chicago, 1974

Karen L Pavelka, Lecturer  
School of Information  
MS, Columbia University in the City of New York, 1988

Mary L Rice-Lively, Lecturer  
School of Information  
PhD, University of Texas at Austin, 1996

Linda R Rivera, Lecturer  
School of Information  
MLS, Texas Woman's University, 1981

Loriene Roy, Professor  
School of Information  
PhD, University of Illinois at Urbana-Champaign, 1987

Richard H Schneeman, Adjunct Assistant Professor  
School of Information  
BS, Georgia Institute of Technology, 2008

Alonzo Fleming Seay, Adjunct Assistant Professor  
School of Information  
PhD, Carnegie Mellon University, 2006

Brooke E Sheldon, Professor Emeritus  
School of Information  
PhD, University of Pittsburgh, Pittsburgh Campus, 1977

Kim Clifton Smith, Adjunct Assistant Professor  
School of Information  
PhD, Brown University, 1983

Clay Spinuzzi, Associate Professor  
School of Information  
PhD, Iowa State University, 1999

Shawn Q Stewart, Lecturer  
School of Information

MLIS, University of Texas at Austin, 1999

Stephanie D Swenson, Adjunct Assistant Professor  
School of Information  
JD, University of Texas at Austin, 1994

Ciaran Trace, Assistant Professor  
School of Information  
PhD, University of California-Los Angeles, 2004

Jo Lynn Westbrook, Associate Professor  
School of Information  
PhD, University of Michigan-Ann Arbor, 1995

Andrew B Whinston, Professor  
Hugh Roy Cullen Centennial Chair in Business Administration  
School of Information  
PhD, Carnegie Mellon University, 1962

Amanda J Williams, Adjunct Assistant Professor  
John P. Commons and Alice McCarthy Commons Centennial  
Lectureship in Children's Librarianship  
School of Information  
PhD, University of Texas at Austin, 1998

Megan A Winget, Assistant Professor  
School of Information  
PhD, University of North Carolina at Chapel Hill, 2006

Michael B Winship, Professor  
Iris Howard Regents Professorship in English Literature #2  
School of Information  
DPhil, University of Oxford, 1990

Ronald E Wyllys, Professor Emeritus  
School of Information  
PhD, University of Wisconsin-Madison, 1974

Yan Zhang, Assistant Professor  
School of Information  
PhD, University of North Carolina at Chapel Hill, 2009

## College of Liberal Arts Faculty

Itty Abraham, Associate Professor  
Department of Asian Studies  
Department of Government  
PhD, University of Illinois at Urbana-Champaign, 1993

Jeffrey Bruce Abramson, Professor  
Department of Government  
PhD, Harvard University, 1977

Jason Ira Abrevaya, Professor  
Fred Hofheinz Regents Professorship in Economics  
Department of Economics  
PhD, Massachusetts Institute of Technology, 1996

Robert H Abzug, Professor  
Audre and Bernard Rapoport Regents Chair of Jewish Studies  
Department of History  
Department of American Studies  
PhD, University of California-Berkeley, 1977

Michael W Adams, Associate Professor



Department of English  
PhD, University of Texas at Austin, 1973

Paul C Adams, Associate Professor  
Department of Geography and the Environment  
PhD, University of Wisconsin-Madison, 1993

Richard N Adams, Professor Emeritus  
Department of Anthropology  
PhD, Yale University, 1951

Christopher O Adejumo, Associate Professor  
John L Warfield Center for African and African American Studies  
PhD, Ohio State U Main Campus, 1997

Deanna L Adkins, Research Assistant Professor (Affiliated)  
Department of Psychology  
Department of Psychology  
PhD, University of Texas at Austin, 2005

Ari Adut, Associate Professor  
Department of Sociology  
PhD, University of Chicago, 2004

Omoniyi Afolabi, Associate Professor  
Department of Spanish and Portuguese  
Department of African and African Diaspora Studies  
PhD, University of Wisconsin-Madison, 1997

Kamran S Aghaie, Associate Professor  
Department of Middle Eastern Studies  
Center for Women's and Gender Studies  
Center for Middle Eastern Studies  
Department of History  
PhD, University of California-Los Angeles, 1999

Yukie Aida, Senior Lecturer  
Department of Asian Studies  
PhD, University of Texas at Austin, 1988

Erick Akins, Lecturer  
Department of Geography and the Environment  
MA, Trinity University, 1988

Mahmoud M Al-Batal, Associate Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, University of Michigan-Ann Arbor, 1985

Ilana Albanese, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Florida, 1994

Bethany L Albertson, Assistant Professor  
Department of Government  
PhD, University of Chicago, 2006

Duane G Albrecht, Professor Emeritus  
Department of Psychology  
PhD, University of California-Berkeley, 1978

Adriana A Alcantara, Adjunct Assistant Professor  
Department of Psychology  
PhD, University of Illinois at Urbana-Champaign, 1993

Kamran Ali, Associate Professor  
Marlene and Morton Meyerson Centennial Chair

Department of Anthropology  
Department of Asian Studies  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, Johns Hopkins University, 1998

Samer M Ali, Associate Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Indiana University at Bloomington, 2002

Edwin B Allaire, Professor Emeritus  
Department of Philosophy  
PhD, University of Iowa, 1960

Heather Jayne Allen, Assistant Professor  
Department of Spanish and Portuguese  
PhD, University of Chicago, 2011

Andres Almazan, Professor  
Department of Economics  
PhD, Massachusetts Institute of Technology, 1996

Michael R Anderson, Lecturer  
Department of Government  
PhD, University of Texas at Austin, 2009

Jacqueline L Angel, Professor  
Department of Sociology  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 1989

Ronald J Angel, Professor  
Department of Sociology  
PhD, University of Wisconsin-Madison, 1981

Sarah K Angulo, Lecturer  
Department of Psychology  
PhD, University of Texas at Austin, 2008

Jamie D Aprile, Lecturer  
Department of Classics  
MA, University of California-Los Angeles, 2005

Emilia Arce, Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2009

Katherine M Arens, Professor  
Department of Germanic Studies  
Center for Women's and Gender Studies  
PhD, Stanford University, 1981

Michael A Arguello, Assistant Professor ROTC  
Department of Air Force Science  
MBA, Webster University, 2008

Arturo Arias, Professor  
Department of Spanish and Portuguese  
PhD, L'Ecole des Hautes Etudes en Sciences Sociales, 1978

Eugenio Yatsuda Arima, Assistant Professor  
Department of Geography and the Environment  
PhD, Michigan State University, East Lansing, 2005

David Armstrong, Professor Emeritus  
Department of Classics

PhD, University of Texas at Austin, 1968

Jossianna Arroyo Martinez, Associate Professor  
Department of Spanish and Portuguese  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of California-Berkeley, 1998

Wade L Aubin, Assistant Professor ROTC  
Department of Military Science  
MS, Washington State University, 2000

Javier Auyero, Professor  
Joe R. & Teresa Lozano Long Endowed Professorship #3  
Department of Sociology  
PhD, New Sch for Soc Research, 1998

Germine H Awad, Assistant Professor  
Center for Middle Eastern Studies  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Southern Illinois University Carbondale, 2005

James B Ayres, Professor Emeritus  
Department of English  
PhD, Ohio University Main Campus, 1964

Jennifer Lyn Ayres, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas Southwestern Medical Center at Dallas, 2000

Hina Azam, Assistant Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Duke University, 2007

Mary-Farr J Baker, Professor Emeritus  
Department of French and Italian  
PhD, Harvard University, 1969

Samuel Baker, Associate Professor  
Department of English  
PhD, University of Chicago, 2001

Jason M Baldrige, Associate Professor  
Department of Linguistics  
PhD, University of Edinburgh, 2002

Dana Harry Ballard, Professor  
Department of Psychology  
PhD, University of California-Irvine, 1974

Cecilia Balli, Assistant Professor  
Department of Anthropology  
PhD, Rice University, 2009

Colin James Bannard, Assistant Professor  
Department of Linguistics  
PhD, University of Edinburgh, 2006

Aaron Bar-Adon, Professor  
Department of Middle Eastern Studies  
Department of Linguistics  
Center for Middle Eastern Studies  
PhD, The Hebrew University of Jerusalem, 1959

Zoltan D Barany, Professor

Frank C. Erwin, Jr. Centennial Professorship in Government  
Department of Government  
Department of Slavic and Eurasian Studies  
PhD, University of Virginia (Old Code), 1991

Janine Barchas, Associate Professor  
Department of English  
PhD, University of Chicago, 1995

Jeffrey Barnouw, Professor Emeritus  
Department of English  
PhD, Yale University, 1969

Francisco Javier Barrenechea, Lecturer  
Department of Classics  
PhD, Columbia University in the City of New York, 2005

Jennifer-Kate Barret, Assistant Professor  
Department of English  
PhD, Princeton University, 2008

Phillip J Barrish, Associate Professor  
Department of English  
PhD, Cornell University, 1991

Alice L Batt, Lecturer  
Department of Rhetoric and Writing  
PhD, University of Texas at Austin, 1996

Thomas A Bay, Adjunct Professor  
Plan II Honors Program  
PhD, Columbia University in the City of New York, 1987

David I Beaver, Professor  
Department of Linguistics  
PhD, University of Edinburgh, 1995

John T Beavers, Assistant Professor  
Department of Linguistics  
PhD, Stanford University, 2006

Deborah Beck, Assistant Professor  
Department of Classics  
PhD, Harvard University, 1997

Jennifer S Beer, Associate Professor  
Department of Psychology  
PhD, University of California-Berkeley, 2002

Christopher G Beevers, Associate Professor  
Department of Psychology  
PhD, University of Miami, 2002

Kirsten L Belgum, Associate Professor  
Department of Germanic Studies  
PhD, University of Wisconsin-Madison, 1989

Mary C Beltran, Assistant Professor  
Center for Mexican American Studies  
PhD, University of Texas at Austin, 2002

Valerie R Bencivenga, Senior Lecturer  
Department of Economics  
PhD, University of Toronto, 1985

Chad J Bennett, Lecturer  
Department of English

PhD, Cornell University, 2011

Keisha L Bentley-Edwards, Assistant Professor  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of Pennsylvania, 2009

Charles E Berg, Professor  
Joe M. Dealey, Sr. Professorship in Media Studies  
Center for Mexican American Studies  
PhD, University of Texas at Austin, 1987

Mitchell N Berman, Professor  
Richard Dale Endowed Chair in Law  
Department of Philosophy  
JD, University of Michigan-Ann Arbor, 1993

Betsy A Berry, Senior Lecturer  
Department of English  
PhD, University of Texas at Austin, 1994

Daina R Berry, Associate Professor  
Department of History  
John L Warfield Center for African and African American Studies  
PhD, University of California-Los Angeles, 1998

Lance Bertelsen, Professor  
Iris Howard Regents Professorship in English Literature  
Department of English  
PhD, University of Washington - Seattle, 1979

John Allen Bertelson, Clinical Assistant Professor  
Department of Psychology  
MD, University of Texas Medical Branch, 1998

Rebecca Bigler, Professor  
Department of Psychology  
Center for Women's and Gender Studies  
PhD, Penn State University Park, 1991

Daniela Bini, Professor  
David Bruton, Jr. Centennial Professorship in Modern Languages  
Department of French and Italian  
PhD, University of Texas at Austin, 1970

Douglas G Biow, Professor  
The Superior Oil Company - Linward Shivers Centennial Professorship  
in Medieval and Renaissance Studies  
Department of French and Italian  
Department of History  
PhD, Johns Hopkins University, 1990

David P Birdsong, Professor  
Department of French and Italian  
PhD, Harvard University, 1979

Daniel J Birkholz, Associate Professor  
Department of English  
PhD, University of Minnesota-Twin Cities, 1999

Marc Bizer, Associate Professor  
Department of French and Italian  
PhD, Princeton University, 1993

Anna S Bjurman-Pautz, Lecturer  
Department of Philosophy

PhD, Lund University, 2003

Sandra Black, Professor  
Audre and Bernard Rapoport Centennial Chair in Economics and  
Public Affairs  
Department of Economics  
PhD, Harvard University, 1997

Amy Dixon Blackmon, Clinical Assistant Professor  
Department of Psychology  
PhD, Yale University, 2000

Mary E Blockley, Professor  
Department of English  
PhD, Yale University, 1984

Carl S Blyth, Associate Professor  
Department of French and Italian  
PhD, Cornell University, 1990

Hans C Boas, Associate Professor  
Department of Germanic Studies  
Department of Linguistics  
PhD, University of North Carolina at Chapel Hill, 2000

Marion Enid Bodian, Professor  
Department of History  
PhD, Hebrew University, 1988

Deborah A Bolnick, Assistant Professor  
Department of Anthropology  
PhD, University of California-Davis, 2005

Daniel A Bonevac, Professor  
Department of Philosophy  
PhD, University of Pittsburgh, Pittsburgh Campus, 1980

Paola Bonifazio, Assistant Professor  
Department of French and Italian  
PhD, New York University, 2008

Catherine Boone, Professor  
Department of Government  
PhD, Massachusetts Institute of Technology, 1987

John G Bordie, Professor Emeritus  
Department of Linguistics  
PhD, University of Texas at Austin, 1958

Jason R Borge, Associate Professor  
Department of Spanish and Portuguese  
PhD, University of California-Berkeley, 2002

Pascale R Bos, Associate Professor  
Department of Germanic Studies  
Center for Women's and Gender Studies  
PhD, University of Minnesota-Twin Cities, 1998

Ra'Anan S Boustan, Harrington Faculty Fellow  
Department of Religious Studies  
PhD, Princeton University, 2004

Svetlana Boyarchenko, Associate Professor  
Department of Economics  
PhD, Rostov State University, 1983

Mildred V Boyer, Professor Emeritus  
Department of Spanish and Portuguese

PhD, University of Texas at Austin, 1956

Robert S Boyer, Professor Emeritus  
Department of Philosophy  
PhD, University of Texas at Austin, 1971

Kirsten E Bradbury, Lecturer  
Department of Psychology  
PhD, Virginia Polytechnic Institute and State University, 2005

William R Braisted, Professor Emeritus  
Department of History  
PhD, University of Chicago, 1950

Claud A Bramblett, Professor Emeritus  
Department of Anthropology  
PhD, University of California-Berkeley, 1967

Henry W Brands, Professor  
The Raymond Dickson, Alton C. Allen and Dillon Anderson Centennial  
Professorship  
Department of History  
PhD, University of Texas at Austin, 1985

Elizabeth Crane Brandt, Visiting Professor  
Department of English  
BA, George Washington University, 1984

David Braybrooke, Professor Emeritus  
Department of Government  
PhD, Cornell University, 1953

Brian A Bremen, Associate Professor  
Department of English  
PhD, Princeton University, 1989

Michael Brenner, Senior Lecturer  
Department of Government  
PhD, University of California-Berkeley, 1968

Joel P Brereton, Associate Professor  
Department of Asian Studies  
Department of Religious Studies  
PhD, Yale University, 1975

Daniel M Brinks, Associate Professor  
Department of Government  
PhD, University of Notre Dame, 2004

Philip M Broadbent, Assistant Professor  
Department of Germanic Studies  
PhD, University College London, 2005

Katharine S Brooks, Lecturer  
Humanities Program  
EdD, West Virginia University, 1989

Mark Anthony Broomfield, Lecturer  
Department of African and African Diaspora Studies  
PhD, University of California-Riverside, 2010

James B Brow, Professor Emeritus  
Department of Anthropology  
Department of Asian Studies  
PhD, University of Washington - Seattle, 1974

Benjamin Claude Brower, Assistant Professor  
Department of History

Center for Middle Eastern Studies  
PhD, Cornell University, 2005

Anthony L Brown, Assistant Professor  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of Wisconsin-Madison, 2006

Carolyn M Brown, Professor  
John L Warfield Center for African and African American Studies  
PhD, University of Florida, 1994

Jonathan C Brown, Professor  
Department of History  
Teresa Lozano Long Institute of Latin American Studies  
PhD, University of Texas at Austin, 1976

Keffrelyn D Brown, Assistant Professor  
Center for Women's and Gender Studies  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of Wisconsin-Madison, 2006

Simone Arlene Browne, Assistant Professor  
Department of Sociology  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of Toronto, 2007

Grayson D Browning, Professor Emeritus  
Department of Philosophy  
PhD, University of Texas at Austin, 1958

Harley L Browning, Professor Emeritus  
Department of Sociology  
PhD, University of California-Berkeley, 1962

Jason M Brownlee, Associate Professor  
Department of Government  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, Princeton University, 2004

Kristen Brustad, Associate Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Harvard University, 1991

Douglas S Bruster, Professor  
Mody C. Boatright Regents Professorship in American and English  
Literature  
Department of English  
PhD, Harvard University, 1990

Erika M Bsumek, Associate Professor  
Department of History  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 2000

Bruce Buchanan, Professor  
Department of Government  
PhD, Yale University, 1972

Lawrence Ray Buchanan, Assistant Professor  
Department of Philosophy  
PhD, New York University, 2008



Robert J Buchanan, Adjunct Associate Professor  
Department of Psychology  
MD, Saint Louis University, 1993

Cynthia J Buckley, Associate Professor  
Department of Sociology  
Department of Slavic and Eurasian Studies  
PhD, University of Michigan-Ann Arbor, 1991

Thomas M Buckley, Specialist  
Department of Rhetoric and Writing  
MA, Penn State University Park, 1985

J Budziszewski, Professor  
Department of Government  
Department of Philosophy  
PhD, Yale University, 1981

Barbara Ellen Bullock, Professor  
Department of French and Italian  
Department of Spanish and Portuguese  
PhD, University of Delaware, 1990

Jerome F Bump, Professor  
Department of English  
PhD, University of California-Berkeley, 1972

Melissa R Bunner, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1997

Paul J Burka, Adjunct Professor  
Plan II Honors Program  
LLB, University of Texas at Austin, 1967

Virginia G Burnett, Professor  
Department of History  
Department of Religious Studies  
PhD, Tulane University, 1986

Walter D Burnham, Professor Emeritus  
Department of Government  
PhD, Harvard University, 1962

Arnold H Buss, Professor Emeritus  
Department of Psychology  
PhD, Indiana University at Bloomington, 1952

David M Buss, Professor  
Department of Psychology  
PhD, University of California-Berkeley, 1981

Johnny S Butler, Professor  
Herb Kelleher Chair in Entrepreneurship, J. Marion West Chair for  
Constructive Capitalism  
Department of Sociology  
John L Warfield Center for African and African American Studies  
PhD, Northwestern University, 1974

Matthew J Butler, Associate Professor  
Department of History  
PhD, University of Bristol, 1999

Karl W Butzer, Professor  
Raymond Dickson Centennial Professorship #1  
Department of Geography and the Environment  
Department of Anthropology

PhD, University of Bonn, 1957

Richard F Buxton, Lecturer  
Department of Classics  
PhD, University of Washington - Seattle, 2010

Ryan Byrne, Assistant Professor  
Department of Middle Eastern Studies  
PhD, Johns Hopkins University, 2002

Cris Cabello De Martinez, Senior Lecturer  
Department of Spanish and Portuguese  
Center for Mexican American Studies  
PhD, University of Texas at Austin, 1993

Thomas M Cable, Professor Emeritus  
Department of English  
PhD, University of Texas at Austin, 1969

Marika Cabral, Assistant Professor  
Department of Economics  
PhD, Stanford University, 2011

Gabrielle J Calvocoressi, Visiting Professor  
Department of English  
MFA, Columbia University in the City of New York, 2000

Craig A Campbell, Assistant Professor  
Department of Anthropology  
PhD, University of Alberta, 2009

Jorge Canizares, Professor  
Alice Jane Drysdale Sheffield Regents Professorship in History  
Department of History  
PhD, University of Wisconsin-Madison, 1995

Charlotte Canning, Professor  
Frank C. Erwin, Jr. Centennial Professorship in Drama  
Center for Women's and Gender Studies  
PhD, University of Washington - Seattle, 1991

Carlos A Capra, Lecturer  
Department of French and Italian  
DMA, University of Texas at Austin, 1999

Luis Ernesto Carcamo-Huechante, Assistant Professor  
Department of Spanish and Portuguese  
PhD, Cornell College, 2001

Don E Carleton, Senior Lecturer  
Department of History  
PhD, University of Houston, 1978

Caryn L Carlson, Professor  
Department of Psychology  
PhD, University of Georgia, 1984

Nicolas Carrasco, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1990

Benjamin H Carrington, Associate Professor  
Department of Sociology  
Center for Women's and Gender Studies  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Leeds Metropolitan University, 2004

Patrick J Carroll, Senior Lecturer  
Department of Psychology  
PhD, University of Massachusetts, 1983

Charles Daniel Carson, Assistant Professor  
John L Warfield Center for African and African American Studies  
PhD, University of Pennsylvania, 2008

Ronald Alan Carson, Adjunct Professor  
Plan II Honors Program  
PhD, University of Glasgow, 1968

Joseph C Carter, Professor  
Centennial Professorship in Classical Archaeology  
Department of Classics  
PhD, Princeton University, 1971

Mia E Carter, Associate Professor  
Department of English  
PhD, University of Wisconsin-Milwaukee, 1992

Evan B Carton, Professor  
Joan Negley Kelleher Centennial Professorship in Rhetoric and Composition  
Department of English  
PhD, Johns Hopkins University, 1979

Larry D Carver, Professor  
Doyle Professorship in Western Civilization, Frank C. Erwin, Jr.  
Centennial Honors Professorship  
Department of English  
Department of Rhetoric and Writing  
PhD, University of Rochester, 1973

Oscar H Casares, Associate Professor  
Department of English  
MFA, University of Iowa, 2001

Jason Paul Casellas, Assistant Professor  
Department of Government  
Center for Mexican American Studies  
PhD, Princeton University, 2006

Julie C Casey, Lecturer  
Humanities Program  
MA, University of Chicago, 1997

Robert L Causey, Professor Emeritus  
Department of Philosophy  
PhD, University of California-Berkeley, 1967

Jean-Pierre B Cauvin, Professor  
Department of French and Italian  
PhD, Princeton University, 1968

Shannon Eileen Cavanagh, Associate Professor  
Department of Sociology  
Center for Women's and Gender Studies  
PhD, University of North Carolina at Chapel Hill, 2003

Edward Chambers, Assistant Professor  
John L Warfield Center for African and African American Studies  
PhD, University of London, 1998

Bharath Chandrasekaran, Assistant Professor  
Department of Psychology  
PhD, Purdue University Main Campus, 2008

Chih-Wei Chang, Lecturer  
Department of Asian Studies  
MA, University of Texas at Austin, 2000

Sung-Sheng Chang, Professor  
Department of Asian Studies  
PhD, Stanford University, 1985

Terrence Leon Chapman, Assistant Professor  
Department of Government  
PhD, Emory University, 2007

Michael R Charles, Professor  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
MFA, University of Houston, 1993

Davida H Charney, Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, Carnegie Mellon University, 1985

Mounira M Charrad, Associate Professor  
Department of Sociology  
Center for Women's and Gender Studies  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, Harvard University, 1980

Ruramisai Charumbira, Assistant Professor  
Department of History  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Yale University, 2006

Ipsita Chatterjee, Assistant Professor  
Department of Geography and the Environment  
PhD, Clark University, 2007

Vidhu Shekhar Chaturvedi, Lecturer  
Department of Asian Studies  
MA, Banaras Hindu University, 1984

Jeanette C Chen, Lecturer  
Department of Asian Studies  
MA, Middlebury College, 1983

Richard A Cherwitz, Professor  
Department of Rhetoric and Writing  
PhD, University of Iowa, 1978

George S Christian, Adjunct Professor  
Department of English  
PhD, University of Texas at Austin, 2000

Jessica Alice Church-Lang, Assistant Professor  
Department of Psychology  
PhD, Washington University in St Louis, 2008

Sally H Clarke, Professor  
Department of History  
PhD, Brown University, 1987

Nadya Clayton, Lecturer  
Department of Slavic and Eurasian Studies

PhD, University of Texas at Austin, 2010

Harry M Cleaver, Associate Professor  
Department of Economics  
PhD, Stanford University, 1975

Matthew T Clements, Lecturer  
Department of Economics  
PhD, Northwestern University, 2000

Evelyn M Clingerman, Assistant Professor  
Center for Women's and Gender Studies  
PhD, The Catholic University of America, 2001

Dana L Cloud, Associate Professor  
Department of Rhetoric and Writing  
PhD, University of Iowa, 1992

Judith G Coffin, Associate Professor  
Department of History  
Center for Women's and Gender Studies  
PhD, Yale University, 1985

Leslie B Cohen, Professor Emeritus  
Department of Psychology  
PhD, University of California-Los Angeles, 1966

Matthew Cohen, Associate Professor  
Department of English  
PhD, College of William and Mary, 2002

Kevin O Cokley, Associate Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Georgia State University, 1998

Raymond P Connolly, Senior Lecturer  
Department of Linguistics  
MA, California State University-Northridge, 1987

Chikako H Cooke, Lecturer  
Department of Asian Studies  
MA, University of Wisconsin Colleges, 1995

Andrew M Cooper, Associate Professor  
Department of English  
PhD, Columbia University in the City of New York, 1982

Cary Cordova, Assistant Professor  
Department of American Studies  
PhD, University of Texas at Austin, 2005

Lawrence K Cormack, Professor  
Department of Psychology  
PhD, University of California-Berkeley, 1992

Flore E Coulouma, Visiting Associate Professor  
Department of English  
PhD, University of Paris IV, Sorbonne, 2007

James H Cox, Associate Professor  
Department of English  
Center for Mexican American Studies  
PhD, University of Nebraska - Lincoln, 1999

Darrell G Creel, Associate Professor  
Department of Anthropology

PhD, University of Arizona, 1986

David F Crew, Professor  
Department of History  
PhD, Cornell University, 1975

David P Crews, Professor  
Department of Psychology  
PhD, Rutgers the State University of New Jersey Newark Campus,  
1973

Kelley A Crews, Associate Professor  
Department of Geography and the Environment  
PhD, University of North Carolina at Chapel Hill, 2000

Alfred W Crosby, Professor Emeritus  
Department of American Studies  
Department of History  
Department of Geography and the Environment  
PhD, Boston University, 1961

Robert Crosnoe, Professor  
Elsie and Stanley E. (Skinny) Adams, Sr. Centennial Professorship in  
Liberal Arts  
Department of Sociology  
Department of Psychology  
PhD, Stanford University, 1999

Megan J Crowhurst, Associate Professor  
Department of Linguistics  
PhD, University of Arizona, 1991

Elizabeth Cullingford, Professor  
Jane Weinert Blumberg Chair in English  
Department of English  
Center for Women's and Gender Studies  
PhD, University of Oxford, 1977

Gregory B Curtis, Senior Lecturer  
Humanities Program  
MA, San Francisco State University, 1969

Todd Anthony Curtis, Lecturer  
Department of Classics  
PhD, University of Newcastle Upon Tyne, 2010

Ann Cvetkovich, Professor  
Ellen Clayton Garwood Centennial Professorship in Creative Writing  
#2  
Department of English  
Center for Women's and Gender Studies  
PhD, Cornell University, 1988

Douglas C Dacy, Professor  
Department of Economics  
PhD, Harvard University, 1963

Peter H Dana, Senior Lecturer  
Department of Geography and the Environment  
PhD, University of Texas at Austin, 1999

Jonathan Dancy, Professor  
Department of Philosophy  
MA, University of Oxford, 1972

Michel A Dassonville, Professor Emeritus  
Department of French and Italian

PhD, Lava, Univ Of, 1953

D D Davis, Associate Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, University of Texas at Arlington, 1995

Janet M Davis, Associate Professor  
Department of American Studies  
Center for Women's and Gender Studies  
Department of History  
PhD, University of Wisconsin-Madison, 1998

King E Davis, Professor  
The Robert Lee Sutherland Chair in Mental Health and Social Policy  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Brandeis University, 1972

William H Davis, Assistant Professor ROTC  
Department of Air Force Science  
BS, United States Air Force Academy, 2008

Kenyatta Young Dawson, Lecturer  
Center for Asian American Studies  
MA, Texas State University-San Marcos, 2006

Jack C De La Torre, Adjunct Professor  
Department of Psychology  
MD, Complutense University of Madrid, 1979

Lesley A Dean-Jones, Associate Professor  
Department of Classics  
PhD, Stanford University, 1987

Susan Deans-Smith, Associate Professor  
Department of History  
PhD, University of Cambridge, 1984

Francoise M Debacker, Lecturer  
Department of History  
PhD, University of Texas at Austin, 1997

John Deigh, Professor  
Department of Philosophy  
PhD, University of California-Los Angeles, 1979

Rocio C Del Aguila, Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2011

Lina Maria Del castillo, Lecturer  
Department of History  
PhD, University of Miami, 2007

Yvon Delville, Professor  
Department of Psychology  
PhD, University of Massachusetts, 1992

Erik Dempsey, Lecturer  
Thomas Jefferson Center for the Study of Core Texts  
PhD, Boston College, 2007

James R Denbow, Professor  
Department of Anthropology  
PhD, Indiana University at Bloomington, 1983

Ashwini S Deo, Harrington Faculty Fellow

Department of Linguistics  
PhD, Stanford University, 2006

Joshua Dever, Associate Professor  
Department of Philosophy  
PhD, University of California-Berkeley, 1998

Anthony F Di Fiore, Associate Professor  
Department of Anthropology  
PhD, University of California-Davis, 1997

Yoav Di-Capua, Associate Professor  
Department of History  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Princeton University, 2004

Rasha Diab, Assistant Professor  
Department of Rhetoric and Writing  
Department of Middle Eastern Studies  
Department of English  
PhD, University of Wisconsin-Madison, 2009

Randy L Diehl, Professor  
David Bruton, Jr. Regents Chair in Liberal Arts  
Department of Psychology  
PhD, University of Minnesota-Twin Cities, 1975

Henry A Dietz, Professor  
Department of Government  
Teresa Lozano Long Institute of Latin American Studies  
Department of Geography and the Environment  
PhD, Stanford University, 1975

Andrew P Dillon, Professor  
Louis T. Yule Regents Professorship in Library and Information  
Science  
Department of Psychology  
PhD, Loughborough University, 1991

Diana M Dinitto, Professor  
Cullen Trust Centennial Professorship in Alcohol Studies and  
Education  
Center for Women's and Gender Studies  
PhD, Florida State University, 1980

Robert A Divine, Professor Emeritus  
Department of History  
PhD, Yale University, 1954

Daniel N Dixon, Professor-ROTC  
Department of Naval Science  
BS, United States Naval Academy, 1983

Sinan Dogramaci, Assistant Professor  
Department of Philosophy  
PhD, New York University, 2009

Brian F Doherty, Senior Lecturer  
Department of English  
PhD, University of Wisconsin-Milwaukee, 1996

Juan M Dominguez, Assistant Professor  
Department of Psychology  
PhD, State University of New York at Buffalo, 2002

Hector Dominguez-Ruvalcaba, Associate Professor



Department of Spanish and Portuguese  
Center for Women's and Gender Studies  
PhD, University of Colorado at Boulder, 1999

Michael P Domjan, Professor  
Department of Psychology  
PhD, McMaster University, 1973

Wendy I Domjan, Distinguished Senior Lecturer  
Department of Psychology  
Plan II Honors Program  
PhD, University of Wisconsin-Madison, 1977

Stephen Donald, Professor  
Edward Everett Hale Centennial Professorship in Economics  
Department of Economics  
PhD, University of British Columbia, 1990

Bryan Andrew Donaldson, Assistant Professor  
Department of French and Italian  
PhD, Indiana University at Bloomington, 2008

William Doolittle, Professor  
Erich W. Zimmermann Regents Professorship in Geography  
Department of Geography and the Environment  
PhD, University of Oklahoma Norman Campus, 1979

Robin W Doughty, Professor Emeritus  
Department of Geography and the Environment  
PhD, University of California-Berkeley, 1971

Robert A Dull, Assistant Professor  
Department of Geography and the Environment  
PhD, University of California-Berkeley, 2001

Richard Dusansky, Professor  
Richard J. Gonzalez Regents Chair in Economic Progress Based on  
Freedom and Private Enterprise  
Department of Economics  
PhD, Brown University, 1969

Christine L Duvauchelle, Associate Professor  
Department of Psychology  
PhD, University of California-Santa Barbara, 1991

David J Eaton, Professor  
Bess Harris Jones Centennial Professorship in Natural Resource  
Policy Studies  
Center for Middle Eastern Studies  
Department of Geography and the Environment  
Department of Middle Eastern Studies  
PhD, Johns Hopkins University, 1977

Jennifer V Ebbeler, Associate Professor  
Department of Classics  
PhD, University of Pennsylvania, 2001

Catharine H Echols, Associate Professor  
Department of Psychology  
PhD, University of Illinois at Urbana-Champaign, 1987

John G Eden, Professor-ROTC  
Department of Naval Science  
MS, US Army War College, 2008

Ingrid M Edlund-Berry, Professor Emeritus  
Department of Classics

PhD, Bryn Mawr College, 1971

David V Edwards, Professor  
Department of Government  
PhD, Harvard University, 1966

Eric N Edwards, Lecturer  
Department of French and Italian  
MFA, Emporia State University, 1987

I Eibenstein-Alvisi, Lecturer  
Department of French and Italian  
MA, Cornell University, 1995

Sheldon Eklund-Olson, Professor  
Amy Johnson McLaughlin Administrative Chair in Human Ecology,  
Rapoport Centennial Professorship of Liberal Arts  
Department of Sociology  
PhD, University of Washington - Seattle, 1971

Tarek Adnan El-Ariss, Assistant Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Cornell University, 2004

Jules R Elkins, Lecturer  
Department of Geography and the Environment  
PhD, University of California-Berkeley, 2008

Zachary S Elkins, Associate Professor  
Department of Government  
PhD, University of California-Berkeley, 2003

Fred P Ellison, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, University of California-Berkeley, 1952

James M Enelow, Professor  
Department of Government  
PhD, University of Rochester, 1977

Elizabeth Engelhardt, Associate Professor  
Department of American Studies  
Center for Women's and Gender Studies  
PhD, Emory University, 1999

Nora C England, Professor  
Dallas TACA Centennial Professorship in the Humanities  
Department of Linguistics  
Department of Anthropology  
Teresa Lozano Long Institute of Latin American Studies  
PhD, University of Florida, 1975

Patience L Epps, Associate Professor  
Department of Linguistics  
PhD, University of Virginia, 2005

Katrin E Erk, Assistant Professor  
Department of Linguistics  
PhD, Saarland University, 2002

Veit F Erlmann, Professor  
History of Music Chair  
Department of Anthropology  
PhD, Foreign Institution, 1978

Zachary T Erwin, Assistant Professor

Department of Spanish and Portuguese  
PhD, Duke University, 2010

Lester L Faigley, Professor  
Robert Adger Law and Thos. H. Law Centennial Professorship in  
Humanities  
Department of Rhetoric and Writing  
Department of English  
PhD, University of Washington - Seattle, 1976

Toni L Falbo, Professor  
Department of Sociology  
PhD, University of California-Los Angeles, 1973

Oloruntoyin O Falola, Professor  
Frances Higginbotham Nalle Centennial Professorship in History  
Department of History  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Obafemi Awolowo University, 1981

Laila Hasan Familiar, Lecturer  
Department of Middle Eastern Studies  
MA, American University in Cairo, 2008

Hafez Farmayan, Professor Emeritus  
Department of History  
PhD, Georgetown University, 1953

Norman K Farmer, Professor Emeritus  
Department of English  
PhD, University of Pennsylvania, 1966

John P Farrell, Professor Emeritus  
Department of English  
PhD, Indiana University at Bloomington, 1967

Peter Fazziola, Lecturer  
Department of French and Italian  
PhD, University of Iowa, 1975

Robert A Fernea, Professor Emeritus  
Department of Anthropology  
Center for Middle Eastern Studies  
PhD, University of Chicago, 1959

Linda Ferreira-Buckley, Associate Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, University of Pennsylvania, 1990

Enrique H Fierro, Associate Professor  
Department of Spanish and Portuguese  
BEd, Instituto de Profesores Artigas, 1973

Fatima Zohra Filali Salek, Lecturer  
Department of Middle Eastern Studies  
MA, Moulay Ismail University, 2001

Karen L Fingerman, Professor  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 1993

Stephen E Finn, Clinical Associate Professor  
Department of Psychology  
PhD, University of Minnesota-Twin Cities, 1984

Walter I Firey, Professor Emeritus  
Department of Sociology  
PhD, Harvard University, 1945

Kirsten C Fischer, Assistant Professor  
Department of Asian Studies  
PhD, University of California-Berkeley, 2004

Larry Fisher, Clinical Assistant Professor  
Department of Psychology  
PhD, New York University, 1969

Hope Hackman Fitzgerald, Lecturer  
Department of Middle Eastern Studies  
MA, University of Texas at Austin, 2008

George F Flaherty, Assistant Professor  
Center for Mexican American Studies  
PhD, University of California-Santa Barbara, 2010

Vivian Flanzer, Lecturer  
Department of Spanish and Portuguese  
MA, Universidade Federal do Rio de Janeiro, 1994

Richard R Flores, Professor  
C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #3  
Department of Anthropology  
Center for Mexican American Studies  
PhD, University of Texas at Austin, 1989

Betty M Flowers, Professor Emeritus  
Department of English  
PhD, University of London, 1973

Matthew Flynn, Lecturer  
Department of Sociology  
PhD, University of Texas at Austin, 2010

Douglas E Foley, Professor  
Department of Anthropology  
PhD, Stanford University, 1970

Neil F Foley, Professor  
Department of History  
Department of American Studies  
PhD, University of Michigan-Ann Arbor, 1990

William E Forbath, Professor  
Lloyd M. Bentsen Chair in Law  
Department of History  
JD, Yale University, 1983

Vicente Fores-Lopez, Visiting Associate Professor  
Department of Spanish and Portuguese  
PhD, Universidad de Valencia, 1986

George B Forgie, Associate Professor  
Department of History  
PhD, Stanford University, 1972

Kevin M Foster, Assistant Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of Texas at Austin, 2001

Maria Franklin, Associate Professor  
Department of Anthropology

Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of California-Berkeley, 1997

Alison K Frazier, Associate Professor  
Department of History  
Department of Religious Studies  
PhD, Columbia University in the City of New York, 1996

Gary P Freeman, Professor  
Department of Government  
PhD, University of Wisconsin-Madison, 1975

Oliver Freiburger, Associate Professor  
Department of Asian Studies  
Department of Religious Studies  
PhD, Georg-August Universität Göttingen, 1999

Eric Dean Frey, Clinical Assistant Professor  
Department of Psychology  
PhD, Texas Tech University, 1999

Alan W Friedman, Professor  
Arthur J. Thaman and Wilhelmina Dore' Thaman Endowed  
Professorship in English #3  
Department of English  
PhD, University of Rochester, 1966

Stanley Friedman, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Notre Dame, 1983

Steven J Friesen, Professor  
The Louise Farmer Boyer Chair in Biblical Studies  
Department of Religious Studies  
Department of Classics  
PhD, Harvard University, 1990

William P Frisbie, Professor Emeritus  
Department of Sociology  
PhD, University of North Carolina at Chapel Hill, 1972

Adria Frizzi, Lecturer  
Department of French and Italian  
PhD, Pennsylvania State University Main Campus, 1988

Penelope F Frohlich, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 2003

Kim Fromme, Professor  
Department of Psychology  
PhD, University of Washington - Seattle, 1988

Jennifer Fuller, Assistant Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of Wisconsin-Madison, 2004

Kelly Fulton, Lecturer  
Department of Sociology  
PhD, University of Texas at Austin, 2004

Laura J Furman, Professor Emeritus  
Department of English  
BA, Bennington College, 1968

Michael Gagarin, Professor Emeritus  
Department of Classics  
PhD, Yale University, 1968

James K Galbraith, Professor  
Lloyd M. Bentsen, Jr. Chair in Government/Business Relations  
Department of Government  
PhD, Yale University, 1981

G K Galinsky, Professor  
Floyd A. Cailloux Centennial Professorship  
Department of Classics  
PhD, Princeton University, 1966

Omer R Galle, Professor Emeritus  
Department of Sociology  
PhD, University of Chicago, 1968

Patricia M Garcia, Lecturer  
Department of English  
PhD, Texas A & M University, 2006

Patrick Meredith Gardner, Lecturer  
Thomas Jefferson Center for the Study of Core Texts  
PhD, University of Notre Dame, 2009

Seth W Garfield, Associate Professor  
Department of History  
Teresa Lozano Long Institute of Latin American Studies  
PhD, Yale University, 1996

James D Garrison, Professor  
Archibald A. Hill Regents Professorship in American and English  
Literature  
Department of English  
PhD, University of California-Berkeley, 1972

Mark E Garrison, Lecturer  
Department of French and Italian  
MFA, University of Texas at Austin, 1991

Ricky Thomas Garvin, Associate Professor ROTC  
Department of Military Science  
MA, Webster University, 2008

Thomas J Garza, Associate Professor  
Department of Slavic and Eurasian Studies  
EdD, Harvard University, 1987

Jennifer Erin Gates-Foster, Assistant Professor  
Department of Classics  
Center for Middle Eastern Studies  
PhD, University of Michigan-Ann Arbor, 2005

Francis J Gavin, Associate Professor  
Department of History  
PhD, University of Pennsylvania, 1997

Wilson S Geisler, Professor  
David Wechsler Regents Chair in Psychology  
Department of Psychology  
PhD, Indiana University at Bloomington, 1975

Vincent J Geraci, Professor Emeritus  
Department of Economics  
PhD, University of Wisconsin-Madison, 1974

Mohammad Ghanoonparvar, Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, University of Texas at Austin, 1979

Zulfikar A Ghose, Professor Emeritus  
Department of English  
BA, Keele University, 1959

Kaushik Ghosh, Assistant Professor  
Department of Anthropology  
Department of Asian Studies  
PhD, Princeton University, 2006

Michael Gibertini, Adjunct Assistant Professor  
Department of Psychology  
PhD, University of Houston, 1984

Dorie J Gilbert, Associate Professor  
Center for Women's and Gender Studies  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of Texas at Austin, 1996

David L Gilden, Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1982

Lyndon K Gill, Assistant Professor  
Department of African and African Diaspora Studies  
PhD, Harvard University, 2010

Tiffany M Gill, Associate Professor  
Department of History  
Center for Women's and Gender Studies  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 2003

Kate Gillespie, Associate Professor  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, University of London, 1983

Terri E Givens, Associate Professor  
Department of Government  
John L Warfield Center for African and African American Studies  
Center for European Studies  
PhD, University of California-Los Angeles, 1999

William P Glade, Professor Emeritus  
Department of Economics  
PhD, University of Texas at Austin, 1955

Jennifer Glass, Professor  
Barbara Pierce Bush Regents Professorship in Liberal Arts  
Department of Sociology  
PhD, University of Wisconsin-Madison, 1983

Andrew Stephen Glover, Assistant Professor  
Department of Economics  
PhD, University of Minnesota-Twin Cities, 2011

Jorge M Gomez-Bocanegra, Lecturer  
Department of Spanish and Portuguese

PhD, Universidad Nacional de Cordoba, 2006

Rueben A Gonzales, Professor  
Jacques P. Servier Regents Professorship in Pharmacy  
Department of Psychology  
PhD, University of Texas at Austin, 1983

John M Gonzalez, Associate Professor  
Department of English  
Center for Mexican American Studies  
PhD, Stanford University, 1998

Miguel Gonzalez-Gerth, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, Princeton University, 1973

Erika M Gonzalez-Lima, Lecturer  
Department of Psychology  
PhD, Texas A & M University, 1989

F Gonzalez-Lima, Professor  
George I. Sanchez Centennial Professorship in Liberal Arts  
Department of Psychology  
PhD, University of Pr Medical Sciences, 1980

Gloria Gonzalez-Lopez, Associate Professor  
Department of Sociology  
Center for Mexican American Studies  
PhD, University of Southern California, 2000

Lalitha Gopalan, Associate Professor  
Department of Asian Studies  
PhD, University of Rochester, 1993

Edmund T Gordon, Associate Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
Department of Anthropology  
PhD, Stanford University, 1981

Andrea C Gore, Professor  
Department of Psychology  
PhD, University of Wisconsin-Madison, 1990

Samuel D Gosling, Professor  
Department of Psychology  
PhD, University of California-Berkeley, 1998

Philip B Gough, Professor Emeritus  
Department of Psychology  
PhD, University of Minnesota-Twin Cities, 1961

Lewis L Gould, Professor Emeritus  
Department of History  
PhD, Yale University, 1966

Don B Graham, Professor  
J. Frank Dobie Regents Professorship in American and English  
Literature  
Department of English  
PhD, University of Texas at Austin, 1971

Lawrence S Graham, Professor Emeritus  
Department of Government  
PhD, University of Florida, 1965

Richard Graham, Professor Emeritus



Department of History  
PhD, University of Texas at Austin, 1961

Jerry Richard Grammer, Adjunct Assistant Professor  
Department of Psychology  
PhD, University of Texas Southwestern Medical Center at Dallas, 1982

Darlene Grant, Associate Professor  
John L Warfield Center for African and African American Studies  
PhD, University of Tennessee, 1993

Richard B Grant, Professor Emeritus  
Department of French and Italian  
PhD, Harvard University, 1952

Laurie B Green, Associate Professor  
Department of History  
Center for Women's and Gender Studies  
PhD, University of Chicago, 1999

Penny A Green, Senior Lecturer  
Department of Sociology  
PhD, University of Texas at Austin, 1986

Peter M Green, Professor Emeritus  
Department of Classics  
PhD, University of Cambridge, 1954

Kenneth F Greene, Associate Professor  
Department of Government  
PhD, University of California-Berkeley, 2002

Benjamin G Gregg, Associate Professor  
Department of Government  
PhD, Princeton University, 1996

Gideon M Greif, Visiting Professor  
Schusterman Center for Jewish Studies  
PhD, University of Vienna, 1997

Zenzi Margareta Griffin, Professor  
Department of Psychology  
Department of Linguistics  
PhD, University of Illinois at Urbana-Champaign, 1998

Kali N Gross, Associate Professor  
Department of African and African Diaspora Studies  
PhD, University of Pennsylvania, 1999

Karen Grumberg, Associate Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, University of California-Los Angeles, 2004

Nicole Guidotti-Hernandez, Associate Professor  
Department of American Studies  
PhD, Cornell University, 2004

Nancy C Guilloteau, Lecturer  
Department of French and Italian  
PhD, University of Texas at Austin, 1997

Joshua G Gunn, Associate Professor  
Department of Rhetoric and Writing  
PhD, University of Minnesota-Twin Cities, 2002

Frank A Guridy, Associate Professor  
Department of History

Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of Michigan-Ann Arbor, 2002

Jo Ann Hackett, Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
Department of Religious Studies  
PhD, Harvard University, 1980

Hossein Haghshenas, Senior Lecturer  
Department of Sociology  
PhD, University of Texas at Austin, 1991

Sabine Hake, Professor  
Texas Chair of German Literature and Culture  
Department of Germanic Studies  
Center for Women's and Gender Studies  
Department of Geography and the Environment  
PhD, Universitat Hannover, 1984

Charles R Hale, Professor  
Chair for Western Hemispheric Trade Studies  
Department of Anthropology  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Stanford University, 1990

Lindsay L Hale, Lecturer  
Department of Religious Studies  
PhD, University of Texas at Austin, 1994

Andreana P Haley, Assistant Professor  
Department of Psychology  
PhD, University of Virginia, 2005

Michael G Hall, Professor Emeritus  
Department of History  
PhD, Johns Hopkins University, 1956

Daniel S Hamermesh, Professor  
Sue Killam Professorship in the Foundations of Economics  
Department of Economics  
PhD, Yale University, 1969

Ian F Hancock, Professor  
Harold C. and Alice T. Nowlin Regents Professorship in Liberal Arts  
Department of Linguistics  
Department of English  
PhD, University of London, 1971

Robert J Hankinson, Professor  
Department of Philosophy  
Department of Classics  
PhD, University of Cambridge, 1985

Henry M Hanna, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1991

Kathryn G Hansen, Professor  
Department of Asian Studies  
PhD, University of California-Berkeley, 1978

Niles M Hansen, Professor Emeritus  
Department of Economics

PhD, Indiana University at Bloomington, 1963

Kathryn Paige Harden, Assistant Professor  
Department of Psychology  
PhD, University of Virginia, 2009

Robert L Hardgrave, Professor Emeritus  
Department of Government  
PhD, University of Chicago, 1966

Julie Hardwick, Professor  
Department of History  
PhD, Johns Hopkins University, 1991

Barbara J Harlow, Professor  
Louann and Larry Temple Centennial Professorship in English  
Literature  
Department of English  
Center for Women's and Gender Studies  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, State University of New York at Buffalo, 1977

Robert T Harms, Professor Emeritus  
Department of Linguistics  
PhD, University of Chicago, 1960

Michael P Harney, Associate Professor  
Department of Spanish and Portuguese  
PhD, University of California-Berkeley, 1983

Louis Harrison, Professor  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Louisiana State University and Agricultural and Mechanical  
College, 1997

Roderick P Hart, Professor  
Allan Shivers Centennial Chair in Communication, Walter Cronkite  
Regents Chair in Communication  
Department of Government  
PhD, Pennsylvania State University Park, 1970

John Hartigan, Professor  
Department of Anthropology  
PhD, University of California-Santa Cruz, 1995

Jonathan Edward carey Harvey, Lecturer  
Department of English  
Department of English  
BA, University of Hull, 1989

Edeltraud Harzer Clear, Senior Lecturer  
Department of Asian Studies  
PhD, University of Washington - Seattle, 1986

Shahnaz Hassan, Lecturer  
Department of Asian Studies  
BA, University of the Punjab, 1989

Junko Hatanaka, Lecturer  
Department of Asian Studies  
MA, University of Wisconsin-Madison, 1998

Raymond C Hawkins, Clinical Assistant Professor  
Department of Psychology

PhD, University of Pennsylvania, 1975

Takashi Hayashi, Assistant Professor  
Department of Economics  
PhD, University of Rochester, 2004

Mary Myleen Hayhoe, Professor  
Department of Psychology  
PhD, University of California-San Diego, 1979

Mark D Hayward, Professor  
Department of Sociology  
Center for Women's and Gender Studies  
PhD, Indiana University at Bloomington, 1981

Elizabeth A Hedrick, Associate Professor  
Department of English  
PhD, Columbia University in the City of New York, 1986

Julian V Heilig, Assistant Professor  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Stanford University, 2006

Hubert P Heinen, Professor Emeritus  
Department of Germanic Studies  
PhD, University of Texas at Austin, 1964

Carolyn Heinrich, Professor  
Department of Economics  
PhD, University of Chicago, 1995

Kurt O Heinzelman, Professor  
Department of English  
PhD, University of Massachusetts, 1978

Susan S Heinzelman, Associate Professor  
Department of English  
Center for Women's and Gender Studies  
PhD, University of Western Ontario, 1978

Robert L Helmreich, Professor Emeritus  
Department of Psychology  
PhD, Yale University, 1966

Andrea K Henderson, Lecturer  
Department of Sociology  
PhD, University of Texas at Austin, 2012

Marlone Deshaun Henderson, Assistant Professor  
Department of Psychology  
PhD, New York University, 2006

Geraldine Heng, Associate Professor  
Department of English  
Center for Women's and Gender Studies  
Center for Middle Eastern Studies  
PhD, Cornell University, 1990

Jacqueline M Henkel, Associate Professor  
Department of English  
PhD, University of Minnesota-Twin Cities, 1985

Anja Hennig, Lecturer  
Center for European Studies  
PhD, Europa-Universität Viadrina Frankfurt (Oder), 2011

Jacqueline C Henninger, Assistant Professor

John L Warfield Center for African and African American Studies  
PhD, University of Texas at Austin, 2000

Frederick G Hensey, Professor  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 1967

James R Henson, Lecturer  
Department of Government  
PhD, University of Texas at Austin, 1996

Van Alan Herd, Lecturer  
Department of History  
PhD, University of Oklahoma Norman Campus, 2008

Jeanette M Herman, Lecturer  
Center for Women's and Gender Studies  
PhD, University of Texas at Austin, 2004

Robert L Hernandez, Lecturer  
Center for Mexican American Studies  
PhD, University of Maryland College Park, 2011

Peter Hess, Associate Professor  
Department of Germanic Studies  
Center for European Studies  
PhD, University of Michigan-Ann Arbor, 1984

Thomas R Hester, Professor Emeritus  
Department of Anthropology  
PhD, University of California-Berkeley, 1972

Richard Douglas Heyman, Lecturer  
Department of Geography and the Environment  
PhD, University of Washington - Seattle, 2004

Wayne R Hickenbottom, Senior Lecturer  
Department of Economics  
PhD, University of Minnesota-Twin Cities, 1992

Virginia Higginbotham, Associate Professor Emeritus  
Department of Spanish and Portuguese  
PhD, Tulane University, 1966

Kathleen M Higgins, Professor  
Department of Philosophy  
PhD, Yale University, 1982

John C Higley, Professor  
Jack S. Blanton, Sr. Chair in Australian Studies, James Voss-Texas  
Instruments Regents Professorship in Australian Studies, Caltex  
Professorship in Australian Studies  
Department of Government  
Department of Sociology  
PhD, University of Connecticut, 1968

Forest G Hill, Professor Emeritus  
Department of Economics  
PhD, Columbia University in the City of New York, 1950

Victoria C Hill, Lecturer  
Center for Asian American Studies  
PhD, University of Texas at Austin, 2009

Michael C Hillmann, Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies

PhD, University of Chicago, 1974

Heather Anne Hindman, Assistant Professor  
Department of Asian Studies  
PhD, University of Chicago, 2003

Romeo Hinojosasmith, Professor  
Ellen Clayton Garwood Centennial Professorship in Creative Writing  
#1  
Department of English  
Department of Spanish and Portuguese  
PhD, University of Illinois at Urbana-Champaign, 1969

Lars Hinrichs, Assistant Professor  
Department of English  
PhD, Albert Ludwig University Freiburg im Breisgau, 2006

James A Hitt, Associate Professor Emeritus  
Department of Classics  
PhD, Princeton University, 1954

John G Hixon, Lecturer  
Department of Psychology  
PhD, University of Texas at Austin, 1991

Neville Hoad, Associate Professor  
Department of English  
Center for Women's and Gender Studies  
PhD, Columbia University in the City of New York, 1998

John M Hoberman, Professor  
Department of Germanic Studies  
PhD, University of California-Berkeley, 1975

Herbert I Hochberg, Professor Emeritus  
Department of Philosophy  
PhD, University of Iowa, 1954

Justin D Hodgson, Assistant Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, Clemson University, 2009

Steven D Hoelscher, Professor  
Department of American Studies  
Department of Geography and the Environment  
PhD, University of Wisconsin-Madison, 1995

Kristen A Hogan, Lecturer  
Center for Women's and Gender Studies  
PhD, University of Texas at Austin, 2006

Carole K Holahan, Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1976

Charles J Holahan, Professor  
Department of Psychology  
PhD, University of Massachusetts, 1971

Richard A Holland, Senior Lecturer  
Humanities Program  
MLS, University of Texas at Austin, 1970

Susannah Hollister, Lecturer  
Department of English  
PhD, Yale University, 2009

Vance R Holloway, Associate Professor  
Department of Spanish and Portuguese  
PhD, University of California-Berkeley, 1990

Jakob Holm, Lecturer  
Department of Germanic Studies  
MA, University of Southern Denmark, 1997

Wayne H Holtzman, Professor Emeritus  
Department of Psychology  
PhD, Stanford University, 1950

Robert K Holz, Professor Emeritus  
Department of Geography and the Environment  
John L Warfield Center for African and African American Studies  
Center for Middle Eastern Studies  
PhD, Michigan State University, East Lansing, 1963

Juliet A Hooker, Associate Professor  
Department of Government  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Cornell University, 2001

Christopher D Hoover, Assistant Professor ROTC  
Department of Naval Science  
BS, United States Naval Academy, 2006

Antony G Hopkins, Professor  
Walter Prescott Webb Chair in History  
Department of History  
PhD, University of London, 1964

Kristine L Hopkins, Research Assistant Professor (Affiliated)  
Department of Sociology  
PhD, University of Texas at Austin, 1998

Mariah E Hopkins, Lecturer  
Department of Anthropology  
PhD, University of California-Berkeley, 2008

Joseph M Horn, Professor Emeritus  
Department of Psychology  
PhD, University of Minnesota-Twin Cities, 1969

Amy J Hornby Uribe, Lecturer  
Department of Spanish and Portuguese  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2010

Heather Houser, Assistant Professor  
Department of English  
PhD, Stanford University, 2010

Camilla H Hsieh, Senior Lecturer  
Department of Asian Studies  
PhD, University of Texas at Austin, 1995

Madeline Y Hsu, Associate Professor  
Department of History  
Center for Asian American Studies  
PhD, Yale University, 1996

Thomas K Hubbard, Professor  
Department of Classics  
PhD, Yale University, 1980

Paul F Hudson, Associate Professor  
Department of Geography and the Environment  
PhD, Louisiana State University and Agricultural and Mechanical  
College, 1998

John Huehnergard, Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Harvard University, 1979

David L Huff, Professor Emeritus  
Department of Geography and the Environment  
PhD, University of Washington - Seattle, 1960

Alexander C Huk, Associate Professor  
Department of Psychology  
PhD, Stanford University, 2001

Janice R Hullum, Lecturer  
Department of Sociology  
PhD, University of Texas at Austin, 1980

Robert A Hummer, Professor  
Centennial Commission Professorship in the Liberal Arts #1  
Department of Sociology  
PhD, Florida State University, 1993

Bruce J Hunt, Associate Professor  
Department of History  
PhD, Johns Hopkins University, 1984

Wendy A Hunter, Professor  
Department of Government  
PhD, University of California-Berkeley, 1992

Ted L Huston, Professor  
Amy Johnson McLaughlin Centennial Professorship in Home  
Economics  
Department of Psychology  
PhD, State University of New York at Albany, 1972

Coleman Hutchison, Assistant Professor  
Department of English  
PhD, Northwestern University, 2006

Syed A Hyder, Associate Professor  
Department of Asian Studies  
Center for Middle Eastern Studies  
PhD, Harvard University, 2000

Alejandro Ibarra, Visiting Professor  
Department of Economics  
PhD, Instituto Tecnológico y de Estudios Superiores de Monterrey,  
1998

Devrim Ikizler, Lecturer  
Department of Economics  
PhD, University of Texas at Austin, 2011

Vera Ioudina, Lecturer  
Department of Economics  
PhD, Moscow State University, 1985

Bradley James Irish, Lecturer  
Department of English  
PhD, University of Texas at Austin, 2011



Ira Iscoe, Professor Emeritus  
Department of Psychology  
PhD, University of California-Los Angeles, 1951

Gary J Jacobsohn, Professor  
H. Malcolm Macdonald Chair in Constitutional and Comparative Law  
Department of Government  
PhD, Cornell University, 1972

Joy Ann James, Visiting Professor  
Department of African and African Diaspora Studies  
PhD, Fordham University, 1987

Sarah Anne James, Lecturer  
Department of Classics  
PhD, University of Texas at Austin, 2010

Frank T Jannuzi, Professor Emeritus  
Department of Economics  
PhD, University of London, 1958

Min Jung Jee, Lecturer  
Department of Asian Studies  
PhD, University of Texas at Austin, 2010

Jody Jensen, Professor  
Department of Psychology  
PhD, University of Maryland College Park, 1989

Robert W Jensen, Professor  
Center for Women's and Gender Studies  
PhD, University of Minnesota-Twin Cities, 1992

Jiwon Jeon, Lecturer  
Department of Sociology  
PhD, University of Wisconsin-Madison, 1992

Stephen August Jessee, Assistant Professor  
Department of Government  
PhD, Stanford University, 2007

Patricia S Johansson, Lecturer  
Department of Germanic Studies  
MA, University of Texas at Austin, 2010

Jane A Johnson, Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 1996

Michael Johnson, Assistant Professor  
Department of French and Italian  
PhD, Emory University, 2005

Neil J Johnson, Lecturer  
Humanities Program  
MEd, University of Texas at Austin, 2010

Barbara L Jones, Associate Professor  
Center for Women's and Gender Studies  
PhD, State University of New York at Albany, 2004

Bryan Davidson Jones, Professor  
J. J. "Jake" Pickle Regents Chair in Congressional Studies  
Department of Government  
PhD, University of Texas at Austin, 1970

Jacqueline Jones, Professor

Walter Prescott Webb Chair in History and Ideas, Mastin Gentry White  
Professorship in Southern History, George W. Littlefield Centennial  
Lectureship in American History  
Department of History  
PhD, University of Wisconsin-Madison, 1976

Joni L Jones, Associate Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, New York University, 1993

Meta Duewa Jones, Associate Professor  
Department of English  
Department of African and African Diaspora Studies  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Stanford University, 2001

Theresa A Jones, Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1992

Bella B Jordan, Lecturer  
Department of Slavic and Eurasian Studies  
PhD, University of Texas at Austin, 2002

Robert A Josephs, Professor  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 1990

Cory F Juhl, Professor  
Department of Philosophy  
PhD, University of Pittsburgh, Pittsburgh Campus, 1992

Lee Ann Kahlor, Associate Professor  
Center for Women's and Gender Studies  
PhD, University of Wisconsin-Madison, 2003

Neil D Kamil, Associate Professor  
Department of History  
PhD, Johns Hopkins University, 1989

Bernadeta Kaminska, Lecturer  
Department of Slavic and Eurasian Studies  
MA, Adam Mickiewicz University, 1988

Johan A Kamp, Visiting Professor  
Department of Philosophy  
Department of Linguistics  
PhD, University of California-Los Angeles, 1968

Robert H Kane, Professor Emeritus  
Department of Philosophy  
PhD, Yale University, 1964

John W Kappelman, Professor  
Department of Anthropology  
PhD, Harvard University, 1987

Malikabonu Bakhtiyorovna Karimova, Specialist  
Department of Slavic and Eurasian Studies  
BMS, Tajik State University of Law, Business and Politics, 2011

Akemi Katayama, Lecturer  
Department of Asian Studies  
MA, Portland State University, 1996

Ralph J Kaufmann, Professor Emeritus  
 Department of English  
 PhD, Princeton University, 1953

Ernest N Kaulbach, Professor  
 Department of English  
 PhD, Cornell University, 1970

Mary C Kearney, Associate Professor  
 Center for Women's and Gender Studies  
 PhD, University of South Carolina - Lancaster, 1998

Elizabeth L Keating, Professor  
 Department of Anthropology  
 Department of Linguistics  
 PhD, University of California-Los Angeles, 1994

Ward W Keeler, Associate Professor  
 Department of Anthropology  
 Center for Women's and Gender Studies  
 PhD, University of Chicago, 1982

Matthias Kehrig, Assistant Professor  
 Department of Economics  
 PhD, Northwestern University, 2011

William R Kelly, Professor  
 Department of Sociology  
 PhD, Indiana University at Bloomington, 1979

Orlando R Kelm, Associate Professor  
 Department of Spanish and Portuguese  
 PhD, University of California-Berkeley, 1989

Karen W Kelton, Senior Lecturer  
 Department of French and Italian  
 MLS, University of Texas at Austin, 1975

David A Kendrick, Professor  
 Ralph W. Yarborough Centennial Professorship of Liberal Arts  
 Department of Economics  
 PhD, Massachusetts Institute of Technology, 1966

Martin W Kevorkian, Associate Professor  
 Department of English  
 PhD, University of California-Los Angeles, 2000

Shakeeb Khan, Visiting Professor  
 Department of Economics  
 PhD, Princeton University, 1997

William W Kibler, Professor Emeritus  
 Department of French and Italian  
 PhD, University of North Carolina at Chapel Hill, 1968

Joseph A Kieke, Clinical Associate Professor  
 UTeach-Liberal Arts  
 BA, University of Texas at Austin, 1978

Jessica Renae Kilgore, Lecturer  
 Department of English  
 PhD, University of Texas at Austin, 2010

Su Yeong Kim, Assistant Professor  
 Center for Women's and Gender Studies  
 PhD, University of California-Davis, 2003

Sara E Kimball, Associate Professor  
 Department of English  
 PhD, University of Pennsylvania, 1983

Troy M Kimmel, Senior Lecturer  
 Department of Geography and the Environment  
 BS, Texas A & M University, 1983

Karen R King, Lecturer  
 Department of American Studies  
 PhD, University of Texas at Austin, 2000

Robert D King, Professor Emeritus  
 Department of Linguistics  
 Department of Linguistics  
 PhD, University of Wisconsin-Madison, 1965

David Scott Kirk, Assistant Professor  
 Department of Sociology  
 PhD, University of Chicago, 2006

Edward C Kirk, Associate Professor  
 Department of Anthropology  
 PhD, Duke University, 2003

Gregory W Knapp, Associate Professor  
 Department of Geography and the Environment  
 PhD, University of Wisconsin-Madison, 1984

Ramey Ko, Lecturer  
 Center for Asian American Studies  
 JD, University of Chicago, 2006

Dale A Koike, Professor  
 Department of Spanish and Portuguese  
 PhD, University of New Mexico Main Campus, 1981

John S Kolsti, Professor Emeritus  
 Department of Slavic and Eurasian Studies  
 PhD, Harvard University, 1968

Robert C Koons, Professor  
 Department of Philosophy  
 PhD, University of California-Los Angeles, 1987

Ty B Kopke, Assistant Professor ROTC  
 Department of Naval Science  
 BS, University of Oklahoma Norman Campus, 2000

George J Kopser, Professor-ROTC  
 Department of Military Science  
 MA, Harvard University, 2002

David D Kornhaber, Assistant Professor  
 Department of English  
 PhD, Columbia University in the City of New York, 2009

Donna Marie Kornhaber, Lecturer  
 Department of English  
 PhD, Columbia University in the City of New York, 2009

Anne-Victoire Kountz, Lecturer  
 Department of French and Italian  
 MA, Universite Jean Moulin, Lyon III, 2007

Charles A Krecz, Senior Lecturer  
 Department of Philosophy  
 PhD, University of Texas at Austin, 1975

John H Kroll, Professor Emeritus  
Department of Classics  
PhD, Harvard University, 1968

Judith Kroll, Associate Professor  
Department of English  
PhD, Yale University, 1974

Joseph E Kruppa, Professor Emeritus  
Department of English  
PhD, Johns Hopkins University, 1964

Shanti Kumar, Associate Professor  
Center for Asian American Studies  
Department of Asian Studies  
PhD, Indiana University at Bloomington, 1987

Crystal Marie Kurzen, Lecturer  
Department of English  
PhD, University of Texas at Austin, 2011

Tatiana Kuzmic, Assistant Professor  
Department of Slavic and Eurasian Studies  
PhD, University of Illinois at Urbana-Champaign, 2008

Francois P Lagarde, Associate Professor  
Department of French and Italian  
PhD, Stanford University, 1985

Chiu-Mi Lai, Senior Lecturer  
Department of Asian Studies  
PhD, University of Washington - Seattle, 1990

Knud P Lambrecht, Professor Emeritus  
Department of French and Italian  
PhD, University of California-Berkeley, 1986

John E Lamphear, Professor Emeritus  
Department of History  
PhD, University of London, 1972

Judith H Langlois, Professor  
Charles and Sarah Seay Regents Professorship in Developmental  
Psychology  
Department of Psychology  
PhD, Louisiana State University and Agricultural and Mechanical  
College, 1973

Elayne L Lansford, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 1982

Richard W Lariviere, Professor Emeritus  
Department of Asian Studies  
PhD, University of Pennsylvania, 1978

Peter N Lasalle, Professor  
Susan Taylor McDaniel Regents Professorship in Creative Writing #2  
Department of English  
MA, University of Chicago, 1972

Clarence G Lasby, Professor Emeritus  
Department of History  
PhD, University of California-Los Angeles, 1962

Edgardo Manuel Latrubesse, Associate Professor  
Department of Geography and the Environment

PhD, National University of San Luis, 1992

Mark A Lawrence, Associate Professor  
Department of History  
PhD, Yale University, 1998

David L Leal, Associate Professor  
Department of Government  
Center for Mexican American Studies  
PhD, Stanford University, 1998

Hongjoo Joanne Lee, Assistant Professor  
Department of Psychology  
PhD, Yale University, 2002

Julia Lee, Assistant Professor  
Department of English  
Center for Asian American Studies  
PhD, University of California-Los Angeles, 2005

Cristine H Legare, Assistant Professor  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 2008

Jeffrey C Leon, Lecturer  
Department of Philosophy  
PhD, University of Texas at Austin, 1993

Kari N Leonard, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 2002

Janice Leoshko, Associate Professor  
Department of Asian Studies  
PhD, Ohio State U Main Campus, 1987

Wayne Lesser, Associate Professor  
Department of English  
PhD, University of Chicago, 1975

Brian P Levack, Professor  
John E. Green Regents Professorship in History  
Department of History  
PhD, Yale University, 1969

Philippa Judith Levine, Professor  
Mary Helen Thompson Centennial Professorship in the Humanities  
Department of History  
Center for Women's and Gender Studies  
PhD, University of Oxford, 1984

Sanford V Levinson, Professor  
W. St. John Garwood and W. St. John Garwood, Jr. Centennial Chair  
in Law  
Department of Government  
JD, Stanford University, 1973

Marc S Lewis, Associate Professor  
Department of Psychology  
PhD, University of Cincinnati Main Campus, 1973

Randolph R Lewis, Associate Professor  
Department of American Studies  
PhD, University of Texas at Austin, 1994

Rebecca J Lewis, Assistant Professor  
Department of Anthropology

PhD, Duke University, 2004

Huaiyin Li, Associate Professor  
Department of History  
Department of Asian Studies  
PhD, University of California-Los Angeles, 2000

Tatjana Lichtenstein, Assistant Professor  
Department of History  
PhD, University of Toronto, 2009

Harold A Liebowitz, Professor Emeritus  
Department of Middle Eastern Studies  
PhD, University of Pennsylvania, 1972

Nhi Truong Lieu, Assistant Professor  
Department of American Studies  
Center for Asian American Studies  
Center for Women's and Gender Studies  
PhD, University of Michigan-Ann Arbor, 2004

Vladimir Lifschitz, Professor  
Professorship in Computer Sciences #2  
Department of Philosophy  
PhD, Steklov Mathematical Institute, 1969

Tse-Min Lin, Associate Professor  
Department of Government  
PhD, University of Minnesota-Twin Cities, 1990

Yi-Chun Lin, Lecturer  
Department of Asian Studies  
MA, National Taiwan University, 2010

Bjorn E Lindblom, Professor Emeritus  
Department of Linguistics  
PhD, Lund University, 1968

Leigh L Linden, Assistant Professor  
Department of Economics  
PhD, Massachusetts Institute of Technology, 2004

Berth O Lindfors, Professor Emeritus  
Department of English  
PhD, University of California-Los Angeles, 1969

Stefanie A Lindquist, Professor  
A. W. Walker Centennial Chair in Law, John Jeffers Research Chair in Law  
Department of Government  
PhD, University of South Carolina - Columbia, 1996

Naomi E Lindstrom, Professor  
Department of Spanish and Portuguese  
PhD, Arizona State University Main, 1974

Jane N Lippmann, Professor Emeritus  
Department of French and Italian  
PhD, University of Illinois at Urbana-Champaign, 1965

Lily Litvak, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, University of California-Berkeley, 1972

Xuecheng Liu, Visiting Associate Professor  
Department of Government  
PhD, University of Texas at Austin, 1993

Keith A Livers, Associate Professor  
Department of Slavic and Eurasian Studies  
PhD, University of Michigan-Ann Arbor, 1995

William S Livingston, Professor Emeritus  
Department of Government  
PhD, Yale University, 1950

James N Loehlin, Professor  
Shakespeare at Winedale Regents Professorship  
Department of English  
PhD, Stanford University, 1993

John C Loehlin, Professor Emeritus  
Department of Psychology  
PhD, University of California-Berkeley, 1957

Mark G Longaker, Associate Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, Pennsylvania State University Main Campus, 2003

Martita A Lopez, Clinical Professor  
Department of Psychology  
PhD, Syracuse University Main Campus, 1977

Michael Lopez, Clinical Associate Professor  
UTeach-Liberal Arts  
MA, University of Texas - Pan American, 1991

William R Louis, Professor  
Mildred Caldwell and Baine Perkins Kerr Centennial Chair in English  
History and Culture, Jo Anne Christian Centennial Professorship in British Studies  
Department of History  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, University of Oxford, 1962

Bradley C Love, Professor  
Department of Psychology  
Department of Psychology  
PhD, Northwestern University, 1999

Timothy J Loving, Associate Professor  
Department of Psychology  
PhD, Purdue University Main Campus, 2001

Gregory A Lozeau, Assistant Professor ROTC  
Department of Naval Science  
BA, University of Rochester, 2003

Marta E Lujan, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 1972

Ayelet Haimson Lushkov, Assistant Professor  
Department of Classics  
PhD, Yale University, 2009

Robert C Luskin, Associate Professor  
Department of Government  
PhD, University of Michigan-Ann Arbor, 1983

Edward Allen MacDuffie, Assistant Professor  
Department of English



PhD, Harvard University, 2006

Stacy I Macias, Lecturer  
Center for Mexican American Studies  
PhD, University of California-Los Angeles, 2011

Carol H Mackay, Professor  
Department of English  
Center for Women's and Gender Studies  
PhD, University of California-Los Angeles, 1979

Prudence Mahaffey Mackintosh, Lecturer  
Humanities Program  
BA, University of Texas at Austin, 1966

Patricia Maclachlan, Associate Professor  
Department of Government  
Department of Asian Studies  
PhD, Columbia University in the City of New York, 1996

Peter F Macneilage, Professor Emeritus  
Department of Psychology  
PhD, McGill University, 1962

W T Maddox, Professor  
Department of Psychology  
PhD, University of California-Santa Barbara, 1992

Raul L Madrid, Associate Professor  
Department of Government  
PhD, Stanford University, 1999

Stephen P Magee, Professor  
James L. Bayless/Enstar Corp. Chair in Business Administration  
Department of Economics  
PhD, Massachusetts Institute of Technology, 1969

James L Magnuson, Professor  
Department of English  
MS, University of Wisconsin-Madison, 1964

Minkah Makalani, Assistant Professor  
Department of African and African Diaspora Studies  
PhD, University of Illinois at Urbana-Champaign, 2004

Madhavi Mallapragada, Assistant Professor  
Center for Asian American Studies  
Department of Asian Studies  
PhD, University of Wisconsin-Madison, 2003

Eric S Mallin, Associate Professor  
Department of English  
PhD, Stanford University, 1986

Joseph F Malof, Professor Emeritus  
Department of English  
PhD, University of California-Los Angeles, 1961

Ian R Manners, Professor Emeritus  
Department of Geography and the Environment  
PhD, University of Oxford, 1969

George B Mansbridge, Clinical Assistant Professor  
Department of Psychology  
PhD, Boston University, 1979

Sanford C Marble, Lecturer  
Department of Economics

PhD, University of Texas at Austin, 1996

Abraham Marcus, Associate Professor  
Department of History  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, Columbia University in the City of New York, 1979

Arthur B Markman, Professor  
Annabel Irion Worsham Centennial Professorship in Liberal Arts  
Department of Psychology  
PhD, University of Illinois at Urbana-Champaign, 1992

F R Marshall, Professor Emeritus  
Audre and Bernard Rapoport Centennial Chair in Economics and  
Public Affairs  
Department of Economics  
PhD, University of California-Berkeley, 1954

Stephen H Marshall, Assistant Professor  
Department of American Studies  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Harvard University, 2002

Susan E Marshall, Professor  
Department of Sociology  
PhD, University of Massachusetts, 1980

Leticia Junqueira Marteleto, Assistant Professor  
Department of Sociology  
PhD, University of Michigan-Ann Arbor, 2001

Norman M Martin, Professor Emeritus  
Department of Philosophy  
PhD, University of California-Los Angeles, 1952

Alberto A Martinez, Associate Professor  
Department of History  
PhD, University of Minnesota-Twin Cities, 2000

Anne M Martinez, Assistant Professor  
Department of History  
Center for Mexican American Studies  
PhD, University of Minnesota-Twin Cities, 2003

Enrique Martinez-Garcia, Assistant Professor  
Department of Economics  
PhD, University of Wisconsin Colleges, 2007

Aloysius P Martinich, Professor  
Roy Allison Vaughan Centennial Professorship in Philosophy  
Department of Philosophy  
Department of Government  
Department of History  
PhD, University of California-San Diego, 1973

Noah Mass, Specialist  
Department of English  
Department of English  
PhD, University of Texas at Austin, 2011

Laurent Alexandre Mathevet, Assistant Professor  
Department of Economics  
PhD, California Institute of Technology, 2008

Joseph H Matluck, Professor Emeritus

Department of Spanish and Portuguese  
PhD, Nat University of Mexico, 1951

Tracie M Matysik, Associate Professor  
Department of History  
PhD, Cornell University, 2001

Janice C May, Professor Emeritus  
Department of Government  
PhD, University of Minnesota-Twin Cities, 1952

Linda Mayhew, Lecturer  
Humanities Program  
PhD, University of Texas at Austin, 2005

Alfred L McAlister, Adjunct Associate Professor  
Plan II Honors Program  
PhD, Stanford University, 1976

Elizabeth McCracken, Professor  
James A. Michener Endowed Chair in Writing  
Department of English  
MFA, University of Iowa, 1990

Talia Melanie McCray, Assistant Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of Michigan-Ann Arbor, 2001

Eric Leon Mcdaniel, Associate Professor  
Department of Government  
John L Warfield Center for African and African American Studies  
PhD, University of Illinois at Urbana-Champaign, 2004

Patrick J McDonald, Associate Professor  
Department of Government  
PhD, Ohio State U Main Campus, 2002

Dennis McFadden, Professor Emeritus  
Department of Psychology  
Department of Psychology  
PhD, Indiana University at Bloomington, 1967

Matthew S McGlone, Associate Professor  
Center for Women's and Gender Studies  
PhD, Princeton University, 1994

John Mclver, Senior Lecturer  
Department of Government  
PhD, Indiana University at Bloomington, 1986

John McKiernan-Gonzalez, Assistant Professor  
Department of History  
Center for Mexican American Studies  
PhD, University of Michigan-Ann Arbor, 2002

Samuel D McLemore, Professor Emeritus  
Department of Sociology  
PhD, Yale University, 1961

Standish Meacham, Professor Emeritus  
Department of History  
PhD, Harvard University, 1961

Amy Moore Meeks, Lecturer  
Department of Psychology  
PhD, Virginia Polytechnic Institute and State University, 1985

Richard P Meier, Professor  
Robert D. King Centennial Professorship of Liberal Arts  
Department of Linguistics  
Department of Psychology  
PhD, University of California-San Diego, 1982

Jeffrey L Meikle, Professor  
Stiles Professorship in American Studies  
Department of American Studies  
PhD, University of Texas at Austin, 1977

Martha Menchaca, Professor  
Department of Anthropology  
Center for Women's and Gender Studies  
Center for Mexican American Studies  
PhD, Stanford University, 1987

Sofian Merabet, Assistant Professor  
Department of Anthropology  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, Columbia University in the City of New York, 2009

Walt N Mercer, Lecturer  
Department of Psychology  
PhD, University of North Texas, 1994

Cindy M Meston, Professor  
Department of Psychology  
PhD, University of British Columbia, 1995

Mark Metzler, Associate Professor  
Department of History  
Department of Asian Studies  
PhD, University of California-Berkeley, 1998

Vagdevi V Meunier, Clinical Assistant Professor  
Department of Psychology  
PsyD, Antioch New England Graduate School, 1997

Thoralf Meyer, Lecturer  
Department of Geography and the Environment  
MS, Anhalt University of Applied Sciences, 1999

Julia L Mickenberg, Associate Professor  
Department of American Studies  
PhD, University of Minnesota-Twin Cities, 2000

Harry J Middleton, Senior Lecturer  
Humanities Program  
BA, Louisiana State University and Agricultural and Mechanical  
College, 1947

John C Middleton, Professor Emeritus  
Department of Germanic Studies  
PhD, University of Oxford, 1954

Aragorn S Miller, Lecturer  
Department of History  
PhD, University of Texas at Austin, 2012

Guy H Miller, Associate Professor Emeritus  
Department of History  
PhD, University of Michigan-Ann Arbor, 1970

Jennifer A Miller, Assistant Professor  
Department of Geography and the Environment

PhD, San Diego State University, 2003

Karl H Miller, Associate Professor  
Department of History  
PhD, New York University, 2002

Gail Minault, Professor  
Department of History  
Department of Asian Studies  
Center for Women's and Gender Studies  
Center for Middle Eastern Studies  
PhD, University of Pennsylvania, 1972

Jessica L Miner, Lecturer  
Department of Classics  
PhD, University of Texas at Austin, 2006

Eugenio Javier Miravete, Associate Professor  
Department of Economics  
PhD, Northwestern University, 1996

John Mirowsky, Professor  
Department of Sociology  
PhD, Yale University, 1981

Rodney Moag, Associate Professor Emeritus  
Department of Asian Studies  
PhD, University of Wisconsin-Madison, 1973

Hans-Bernhard Moeller, Associate Professor Emeritus  
Department of Germanic Studies  
PhD, University of Southern California, 1964

Mahboob Ali Mohammad, Lecturer  
Department of Asian Studies  
PhD, University of Wisconsin-Madison, 2006

Mohammad A Mohammad, Associate Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, University of Southern California, 1989

Joseph J Moldenhauer, Professor Emeritus  
Department of English  
PhD, Columbia University in the City of New York, 1964

Robert R Mollenauer, Associate Professor Emeritus  
Department of Germanic Studies  
PhD, Indiana University at Bloomington, 1960

Sidney Monas, Professor Emeritus  
Department of History  
PhD, Harvard University, 1955

Marie Helene Monfils, Assistant Professor  
Department of Psychology  
PhD, University of Lethbridge, 2005

Delia L Montesinos, Senior Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2000

Jean-Pierre Montreuil, Professor  
Department of French and Italian  
PhD, University of Texas at Austin, 1977

Leonard Nathaniel Moore, Professor  
Department of History

John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, The Ohio State University Main Campus, 1998

Lisa L Moore, Associate Professor  
Department of English  
Center for Women's and Gender Studies  
PhD, Cornell University, 1991

Lorraine Marina Moore, Associate Professor  
Department of Spanish and Portuguese  
PhD, King's College, University of London, 2000

Pamela R Moore, Adjunct Assistant Professor  
Department of Psychology  
PhD, Texas Tech University, 1991

Robin D Moore, Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of Texas at Austin, 1995

Timothy J Moore, Professor  
Department of Classics  
PhD, University of North Carolina at Chapel Hill, 1986

Daniel C Morgan, Professor Emeritus  
Department of Economics  
PhD, University of Wisconsin-Madison, 1961

M G Morgan, Professor Emeritus  
Department of Classics  
Department of History  
PhD, University of Exeter, 1962

Rosemary Morrow, Clinical Assistant Professor  
UTeach-Liberal Arts  
PhD, University of Texas at Austin, 1999

Fehintola A Mosadomi, Assistant Professor  
Department of Middle Eastern Studies  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
Center for Middle Eastern Studies  
PhD, Tulane University, 1998

Robert G Moser, Associate Professor  
Department of Government  
Department of Slavic and Eurasian Studies  
PhD, University of Wisconsin-Madison, 1995

Scott James Moser, Assistant Professor  
Department of Government  
PhD, Carnegie Mellon University, 2007

Michael William Mosser, Lecturer  
Department of Government  
PhD, University of Wisconsin-Madison, 2002

Alexander Mourelatos, Professor Emeritus  
Department of Philosophy  
PhD, Yale University, 1964

Stephennie Mulder, Assistant Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies

PhD, University of Pennsylvania, 2008

Chandra L Muller, Professor  
Department of Sociology  
PhD, University of Chicago, 1991

Jeanette Alane Mumford, Research Assistant Professor (Affiliated)  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 2006

Gretchen Murphy, Associate Professor  
Department of English  
Center for Women's and Gender Studies  
PhD, University of Washington - Seattle, 1999

Melissa D Murphy, Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2008

Jan Musekamp, Assistant Professor  
Department of Germanic Studies  
PhD, Europa-Universitat Viadrina Frankfurt (Oder), 2008

Marc A Musick, Professor  
Department of Sociology  
PhD, Duke University, 1997

Scott P Myers, Professor  
Department of Linguistics  
PhD, University of Massachusetts, 1987

Zoltan Nadasdy, Adjunct Assistant Professor  
Department of Psychology  
PhD, Rutgers the State University of New Jersey Newark Campus,  
1999

A Rebecca Neal-Beevers, Assistant Professor  
Department of Psychology  
PhD, University of Miami, 2002

James A Neely, Professor Emeritus  
Department of Anthropology  
PhD, University of Arizona, 1974

Neil R Nehring, Associate Professor  
Department of English  
PhD, University of Michigan-Ann Arbor, 1985

William R Nethercut, Professor  
Department of Classics  
Center for Middle Eastern Studies  
PhD, Columbia University in the City of New York, 1963

Joan H Neuberger, Professor  
Department of History  
Department of Slavic and Eurasian Studies  
PhD, Stanford University, 1985

Mary C Neuburger, Associate Professor  
Department of History  
Center for Middle Eastern Studies  
Department of Slavic and Eurasian Studies  
PhD, University of Washington - Seattle, 1997

Vernon E Neuenschwander, Associate Professor ROTC  
Department of Naval Science  
MS, Troy State University, 1997

Irma Celina Nevarez, Lecturer  
Department of Spanish and Portuguese  
MAEd, Instituto Tecnológico y de Estudios Superiores de Monterrey,  
1998

Martha G Newman, Associate Professor  
Department of History  
Department of Religious Studies  
PhD, Stanford University, 1988

Muoi Van Nguyen, Senior Lecturer  
Department of Asian Studies  
PhD, Vietnam National University, 1997

Son Thanh Nguyen, Associate Professor ROTC  
Department of Air Force Science  
MS, Georgia Military College, 1997

Chiyo Nishida, Associate Professor  
Department of Spanish and Portuguese  
PhD, University of Arizona, 1987

Angela Miyuki Nonaka, Assistant Professor  
Department of Anthropology  
PhD, University of California-Los Angeles, 2007

Alfred L Norman, Professor  
Department of Economics  
PhD, University of Minnesota-Twin Cities, 1971

Robert P O'Brien, Adjunct Assistant Professor  
Department of Psychology  
PhD, University of Florida, 1976

Shannon B O'Brien, Lecturer  
Department of Government  
MA, University of Louisville, 2000

Thomas J O'Hare, Associate Professor Emeritus  
Department of Germanic Studies  
PhD, University of Texas at Austin, 1964

Gerald S Oettinger, Associate Professor  
Department of Economics  
PhD, Massachusetts Institute of Technology, 1993

Guillermina Ogando Lavin, Lecturer  
Department of Spanish and Portuguese  
MA, Universidad Antonio de Nebrija, 2002

Moyosore Benjamin Okediji, Associate Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of Wisconsin Colleges, 1995

Jeannette Okur, Lecturer  
Department of Middle Eastern Studies  
PhD, Ankara University, 2007

J P Olivelle, Professor  
Jacob and Frances Sanger Mossiker Chair in the Humanities #1  
Department of Asian Studies  
Department of Religious Studies  
PhD, University of Pennsylvania, 1974

Antonella D Olson, Distinguished Senior Lecturer  
Department of French and Italian



Laurea, Università degli Studi di Roma "La Sapienza", 1978

Robert A Olwell, Associate Professor  
Department of History  
PhD, Johns Hopkins University, 1991

Robert M Oppenheim, Associate Professor  
Department of Asian Studies  
PhD, University of Chicago, 2003

Lucia Osa-Melero, Senior Lecturer  
Department of Spanish and Portuguese  
MA, University of Iowa, 2001

Cynthia Osborne Blaha, Associate Professor  
Center for Women's and Gender Studies  
PhD, Princeton University, 2003

David M Oshinsky, Professor  
Jack S. Blanton, Sr. Chair in History  
Department of History  
PhD, Brandeis University, 1971

Beatrix Paal, Lecturer  
Department of Economics  
PhD, Cornell University, 1999

Yolanda C Padilla, Professor  
Center for Women's and Gender Studies  
PhD, University of Michigan-Ann Arbor, 1993

Karen Anne Pagani, Assistant Professor  
Department of French and Italian  
PhD, University of Chicago, 2008

Angela Naomi Paik, Assistant Professor  
Department of American Studies  
Center for Asian American Studies  
Center for Women's and Gender Studies  
PhD, Yale University, 2009

Thomas G Palaima, Professor  
Raymond Dickson Centennial Professorship #2  
Department of Classics  
Center for Middle Eastern Studies  
PhD, University of Wisconsin-Madison, 1980

Christelle J Palpacuer-Lee, Lecturer  
Department of French and Italian  
MA, Université Lumière, Lyon II, 2005

Lorraine S Pangle, Professor  
Department of Government  
PhD, University of Chicago, 1999

Thomas L Pangle, Professor  
Joe R. Long Endowed Chair in Democratic Studies  
Department of Government  
PhD, University of Chicago, 1972

Athanasio Papalexandrou, Associate Professor  
Center for Middle Eastern Studies  
PhD, Princeton University, 1998

Deborah A Paredez, Associate Professor  
Department of English  
John L Warfield Center for African and African American Studies

Department of African and African Diaspora Studies  
PhD, Northwestern University, 2002

Kyung Park, Lecturer  
Department of Asian Studies  
MA, Yonsei University, 1995

Na'ama Pat-EI, Assistant Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, Harvard University, 2008

Adam Pautz, Assistant Professor  
Department of Philosophy  
PhD, New York University, 2004

Pamela Marie Paxton, Professor  
Centennial Commission Professorship in the Liberal Arts #4  
Department of Sociology  
PhD, University of North Carolina at Chapel Hill, 1998

Antonella C Pease, Associate Professor Emeritus  
Department of French and Italian  
DR, Florence, Univ Of, 1948

Ami Pedahzur, Professor  
Department of Government  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, University of Haifa, 1999

Glenn A Peers, Professor  
Center for Middle Eastern Studies  
PhD, Johns Hopkins University, 1996

Richard H Pells, Professor Emeritus  
Department of History  
PhD, Harvard University, 1969

James W Pennebaker, Professor  
Liberal Arts Foundation Centennial Professorship  
Department of Psychology  
PhD, University of Texas at Austin, 1977

Domino R Perez, Associate Professor  
Department of English  
Center for Mexican American Studies  
PhD, University of Nebraska - Lincoln, 1998

Francisco L Perez, Professor  
Department of Geography and the Environment  
PhD, University of California-Berkeley, 1985

Paula J Perlman, Professor  
Department of Classics  
PhD, University of California-Berkeley, 1983

Hersel W Perry, Associate Professor  
Department of Government  
PhD, University of Michigan-Ann Arbor, 1987

Michael A Pesenson, Assistant Professor  
Department of Slavic and Eurasian Studies  
PhD, Yale University, 2001

Edson Peters, Lecturer  
Teresa Lozano Long Institute of Latin American Studies

PhD, Universidade Federal do Parana, 2002

Stephen H Phillips, Professor  
Department of Philosophy  
Department of Asian Studies  
PhD, Harvard University, 1982

Tasha S Philpot, Associate Professor  
Department of Government  
John L Warfield Center for African and African American Studies  
PhD, University of Michigan-Ann Arbor, 2003

Marc E Pierce, Assistant Professor  
Department of Germanic Studies  
PhD, University of Michigan-Ann Arbor, 2002

Jonathan William Pillow, Assistant Professor  
Department of Psychology  
PhD, New York University, 2005

Samantha Nicole Pinto, Lecturer  
Department of African and African Diaspora Studies  
PhD, University of California-Los Angeles, 2007

Russell A Poldrack, Professor  
Department of Psychology  
PhD, University of Illinois at Urbana-Champaign, 1995

Gabriela Polit, Assistant Professor  
Department of Spanish and Portuguese  
PhD, New York University, 2002

Jo Gretchen Polnac, Clinical Associate Professor  
UTeach-Liberal Arts  
BSEd, University of Texas at Austin, 1976

Lazarus Y Pomara, Lecturer  
Department of Geography and the Environment  
PhD, University of Texas at Austin, 2009

Lito Elio Porto, Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2000

Marina Potoplyak, Lecturer  
Department of Slavic and Eurasian Studies  
PhD, University of Texas at Austin, 2010

Joseph E Potter, Professor  
Department of Sociology  
PhD, Princeton University, 1975

Rose M Potter, Clinical Assistant Professor  
UTeach-Liberal Arts  
MA, University of Northern Iowa, 1984

John G Potthoff, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1995

Lucas A Powe, Professor  
Anne Green Regents Chair  
Department of Government  
JD, University of Washington - Seattle, 1968

Daniel A Powers, Professor  
Department of Sociology

PhD, University of Wisconsin-Madison, 1991

Alison Renee Preston, Assistant Professor  
Department of Psychology  
PhD, Stanford University, 2004

Detra Price-Dennis, Assistant Professor  
John L Warfield Center for African and African American Studies  
PhD, Ohio State U Main Campus, 2009

David F Prindle, Professor  
Department of Government  
PhD, Massachusetts Institute of Technology, 1977

Eric Darnell Pritchard, Assistant Professor  
Department of Rhetoric and Writing  
Department of English  
Department of African and African Diaspora Studies  
PhD, University of Wisconsin-Madison, 2006

Ian N Proops, Professor  
Department of Philosophy  
PhD, Harvard University, 1998

Thomas W Pullum, Professor Emeritus  
Department of Sociology  
PhD, University of Chicago, 1971

David G Quinto-Pozos, Assistant Professor  
Department of Linguistics  
PhD, University of Texas at Austin, 2002

Adam Thomas Rabinowitz, Assistant Professor  
Department of Classics  
PhD, University of Michigan-Ann Arbor, 2004

Sankaran Radhakrishnan, Senior Lecturer  
Department of Asian Studies  
PhD, Annamalai University, 1985

Guy P Raffa, Associate Professor  
Department of French and Italian  
PhD, Indiana University at Bloomington, 1991

Esther L Raizen, Associate Professor  
Department of Middle Eastern Studies  
Center for Middle Eastern Studies  
PhD, University of Texas at Austin, 1987

Ruthine K Raley, Professor  
Department of Sociology  
PhD, University of Wisconsin-Madison, 1994

Manuel Ramirez, Professor  
Department of Psychology  
PhD, University of Texas at Austin, 1963

Silvia D Ramirez, Lecturer  
Department of Spanish and Portuguese  
Licenciado, Nat University of Mexico, 1974

Franky L Ramont, Senior Lecturer  
Department of Linguistics  
MA, University of Nebraska - Lincoln, 1997

Carlos E Ramos, Lecturer  
Department of Geography and the Environment

PhD, Colorado State University, 2004

Gilbert C Rappaport, Professor  
Department of Slavic and Eurasian Studies  
Department of Linguistics  
PhD, University of California-Los Angeles, 1979

Emad G Rawy Gerges, Lecturer  
Department of Middle Eastern Studies  
BA, Assiut University, 1993

Adi Raz, Clinical Assistant Professor  
Department of Middle Eastern Studies  
Texas Language Center  
Center for Middle Eastern Studies  
EdD, Jewish Theological Seminary of America, 2009

Wayne A Reborn, Professor  
Celanese Centennial Professorship  
Department of English  
PhD, Yale University, 1968

Lindsay V Reckson, Lecturer  
Department of English  
PhD, Princeton University, 2011

Richard J Reddick, Assistant Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
EdD, Harvard University, 2007

Cory A Reed, Associate Professor  
Department of Spanish and Portuguese  
PhD, Princeton University, 1989

Denne N Reed, Assistant Professor  
Department of Anthropology  
PhD, State University of New York at Stony Brook, 2003

Lauretta Reeves, Lecturer  
Department of Psychology  
PhD, Temple University, 1993

Mark Regnerus, Associate Professor  
Department of Sociology  
PhD, University of North Carolina at Chapel Hill, 2000

Peter Rehberg, Adjunct Associate Professor  
Department of Germanic Studies  
PhD, New York University, 2001

Ann M Repp, Senior Lecturer  
Department of Psychology  
PhD, University of Texas at Austin, 1994

Penne L Restad, Distinguished Senior Lecturer  
Department of History  
PhD, University of Texas at Austin, 1993

Juan Dario Restrepo, Visiting Professor  
Teresa Lozano Long Institute of Latin American Studies  
PhD, University of South Carolina - Columbia, 2001

Cecile H Rey, Lecturer  
Department of French and Italian  
PhD, University of Texas at Austin, 2010

Jose L Reyes, Associate Professor ROTC

Department of Military Science  
BA, St Edward's University, 1999

Ann M Reynolds, Associate Professor  
Center for Women's and Gender Studies  
PhD, City University of New York Graduate Center, 1993

Edward J Rhoads, Professor Emeritus  
Department of History  
PhD, Harvard University, 1970

Matthew Theodore Richardson, Assistant Professor  
Department of English  
Department of African and African Diaspora Studies  
Center for Women's and Gender Studies  
John L Warfield Center for African and African American Studies  
PhD, University of California-Berkeley, 2005

Elizabeth Richmond-Garza, Associate Professor  
Department of English  
PhD, Columbia University in the City of New York, 1992

Catherine Riegler-Crumb, Assistant Professor  
Department of Sociology  
PhD, University of Chicago, 2000

Andrew M Riggsby, Professor  
Department of Classics  
PhD, University of California-Berkeley, 1993

Gretchen Ritter, Professor  
Department of Government  
Center for Women's and Gender Studies  
PhD, Massachusetts Institute of Technology, 1992

Christian A Rivera, Assistant Professor ROTC  
Department of Naval Science  
BS, United States Naval Academy, 2005

Jill Robbins, Professor  
Department of Spanish and Portuguese  
PhD, University of Kansas Main Campus, 1992

Brian E Roberts, Professor  
Department of Government  
Department of Economics  
PhD, Washington University in St Louis, 1986

Bryan R Roberts, Professor  
C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #1  
Department of Sociology  
PhD, University of Chicago, 1964

Patricia Roberts-Miller, Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, University of California-Berkeley, 1985

Daniel H Robinson, Professor  
Center for Women's and Gender Studies  
PhD, University of Nebraska - Lincoln, 1993

Keith Robinson, Assistant Professor  
Department of Sociology  
John L Warfield Center for African and African American Studies  
PhD, University of Michigan-Ann Arbor, 2006

Enrique R Rodriguez, Associate Professor  
Department of Anthropology  
PhD, University of Chicago, 2002

Nestor P Rodriguez, Professor  
Department of Sociology  
PhD, University of Texas at Austin, 1984

Victoria Rodriguez, Professor  
Department of Government  
PhD, University of California-Berkeley, 1987

Douglass M Rogers, Associate Professor Emeritus  
Department of Spanish and Portuguese  
PhD, University of Wisconsin-Madison, 1964

Sonia Roncador, Associate Professor  
Department of Spanish and Portuguese  
PhD, New York University, 1999

Ana I Rosal, Lecturer  
Center for Women's and Gender Studies  
MPAff, University of Texas at Austin, 2007

Mary Rose, Associate Professor  
Department of Sociology  
PhD, Duke University, 1998

Catherine E Ross, Professor  
Department of Sociology  
PhD, Yale University, 1980

Charles R Rossman, Professor Emeritus  
Department of English  
PhD, University of Southern California, 1968

Jacek Antoni Rothert, Lecturer  
Department of Economics  
PhD, University of Minnesota-Twin Cities, 2010

Michele Angela Rountree, Associate Professor  
Center for Women's and Gender Studies  
PhD, Arizona State University Main, 1992

Loriene Roy, Professor  
Center for Women's and Gender Studies  
PhD, University of Illinois at Urbana-Champaign, 1987

Sharmila Rudrappa, Associate Professor  
Department of Sociology  
Center for Asian American Studies  
Center for Women's and Gender Studies  
PhD, University of Wisconsin-Madison, 2001

John P Rumrich, Professor  
Arthur J. Thaman and Wilhelmina Dore' Thaman Endowed  
Professorship in English #1  
Department of English  
PhD, University of Virginia, 1981

Cinzia Russi, Associate Professor  
Department of French and Italian  
PhD, University of Washington - Seattle, 2003

John J Ruszkiewicz, Professor  
Department of Rhetoric and Writing  
Department of English

PhD, Ohio State U Main Campus, 1977

John N Rutledge, Adjunct Professor  
Department of Psychology  
MD, University of Oklahoma Health Sciences Center, 1980

Michael A Sadler, Senior Lecturer  
Department of Economics  
PhD, University of Texas at Austin, 1997

Alan M Sager, Lecturer  
Department of Government  
PhD, Northwestern University, 1971

Richard M Sainsbury, Professor  
Department of Philosophy  
DPhil, University of Oxford, 1970

Arthur Sakamoto, Professor  
Department of Sociology  
PhD, University of Wisconsin-Madison, 1988

Tomoko Sakuma, Lecturer  
Department of Asian Studies  
PhD, University of Texas at Austin, 2011

Maximo Rafael Salaberry, Professor  
Department of Spanish and Portuguese  
PhD, Cornell University, 1997

Cesar A Salgado, Associate Professor  
Department of Spanish and Portuguese  
PhD, Yale University, 1993

Juan A Salinas, Lecturer  
Department of Psychology  
PhD, University of California-Irvine, 1994

Sahotra Sarkar, Professor  
Department of Philosophy  
PhD, University of Chicago, 1989

Elizabeth D Scala, Associate Professor  
Department of English  
PhD, Harvard University, 1994

Timothy J Schallert, Professor  
Department of Psychology  
PhD, Arizona State University Main, 1976

Joseph Christopher Schaub, Lecturer  
Center for Asian American Studies  
PhD, University of Maryland College Park, 1999

William J Scheick, Professor Emeritus  
Department of English  
PhD, University of Illinois at Urbana-Champaign, 1969

Beatriz E Schleppe, Lecturer  
Department of French and Italian  
PhD, University of Texas at Austin, 2003

Karl M Schmitt, Professor Emeritus  
Department of Government  
PhD, University of Pennsylvania, 1954

Helen Schneider, Lecturer  
Department of Economics



PhD, Cornell University, 2002

David M Schnyer, Associate Professor  
Department of Psychology  
PhD, University of Arizona, 1998

Susan E Schorn, Lecturer  
Department of Rhetoric and Writing  
PhD, University of Texas at Austin, 2000

Roxanne Schroeder, Assistant Professor  
Center for Mexican American Studies  
MFA, University of Texas at Austin, 2000

Martha Schulte-Nafeh, Senior Lecturer  
Department of Middle Eastern Studies  
PhD, University of Arizona, 2004

Mary A Schwartzburg, Lecturer  
Department of English  
PhD, Stanford University, 2004

Megan Seaholm, Lecturer  
Department of History  
PhD, Rice University, 1988

Chad Eugene Seales, Assistant Professor  
Department of Religious Studies  
PhD, University of North Carolina at Chapel Hill, 2007

Carol L Seeger, Senior Lecturer  
Department of Linguistics  
MS, McDaniel College, 1992

Sonia T Seeman, Assistant Professor  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, University of California-Los Angeles, 2002

Eyal Seidemann, Associate Professor  
Department of Psychology  
PhD, Stanford University, 1998

Henry A Selby, Professor Emeritus  
Department of Anthropology  
PhD, Stanford University, 1966

Martha A Selby, Associate Professor  
Department of Asian Studies  
PhD, University of Chicago, 1994

Perrin A Selcer, Lecturer  
Department of History  
PhD, University of Pennsylvania, 2011

Albert D Sellstrom, Professor Emeritus  
Department of French and Italian  
PhD, Princeton University, 1956

David M Sena, Assistant Professor  
Department of Asian Studies  
PhD, University of Chicago, 2005

Suzanne K Seriff, Senior Lecturer  
Department of Anthropology  
PhD, University of Texas at Austin, 1989

Thomas K Seung, Professor

Jesse H. Jones Regents Professorship in Liberal Arts  
Department of Philosophy  
Department of Government  
PhD, Yale University, 1965

Gautami Hiru Shah, Senior Lecturer  
Department of Asian Studies  
MS, Purdue University North Central Campus, 1988

Anousha Shahsavari, Lecturer  
Department of Middle Eastern Studies  
MA, Shiraz University, 2005

Jishnu Shankar, Senior Lecturer  
Department of Asian Studies  
PhD, Syracuse University Main Campus, 2011

Liza J Shapiro, Professor  
Department of Anthropology  
PhD, State University of New York at Stony Brook, 1991

Michael Isaac Shapiro, Lecturer  
Department of Asian Studies  
PhD, University of California-Berkeley, 2010

Daron R Shaw, Professor  
Department of Government  
PhD, University of California-Los Angeles, 1994

Jo A Shea, Specialist  
Department of English  
PhD, University of Texas at Austin, 1998

Cynthia W Shelmerdine, Professor Emeritus  
Department of Classics  
PhD, Harvard University, 1977

Dina M Sherzer, Professor Emeritus  
Department of French and Italian  
PhD, University of Pennsylvania, 1970

Joel F Sherzer, Professor Emeritus  
Department of Anthropology  
PhD, University of Pennsylvania, 1968

Snehal A Shingavi, Assistant Professor  
Department of English  
PhD, University of California-Berkeley, 2008

Faegheh S Shirazi, Professor  
Department of Middle Eastern Studies  
Center for Women's and Gender Studies  
Center for Middle Eastern Studies  
PhD, Ohio State U Main Campus, 1985

Dean M Showalter, Lecturer  
Department of Economics  
PhD, University of Kentucky, 1994

Jason D Shumake, Research Assistant Professor (Affiliated)  
Department of Psychology  
PhD, University of Texas at Austin, 2004

Nicolas Shumway, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, University of California-Los Angeles, 1976

David S Sibley, Professor

John T. Stuart III Centennial Professorship in Economics  
Department of Economics  
PhD, Yale University, 1973

Charles M Silver, Professor  
Roy W. and Eugenia C. McDonald Endowed Chair of Civil Procedure  
Department of Government  
JD, Yale University, 1987

Lok C Siu, Associate Professor  
Department of Anthropology  
Center for Asian American Studies  
PhD, Stanford University, 2000

Gideon A Sjoberg, Professor Emeritus  
Department of Sociology  
PhD, Washington State University, 1949

Allison Skerrett, Assistant Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Boston College, 2007

Melissa E Skidmore, Lecturer  
Department of French and Italian  
PhD, University of Texas at Austin, 2005

Daniel T Slesnick, Professor  
Department of Economics  
PhD, Harvard University, 1982

Rajka Smiljanic, Assistant Professor  
Department of Linguistics  
PhD, University of Illinois at Urbana-Champaign, 2002

Bea A Smith, Adjunct Professor  
Center for Women's and Gender Studies  
JD, University of Texas at Austin, 1975

Cherise Smith, Associate Professor  
Department of African and African Diaspora Studies  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Stanford University, 2004

Christen Anne Smith, Assistant Professor  
Department of Anthropology  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Stanford University, 2007

Mark C Smith, Associate Professor  
Department of American Studies  
Department of History  
PhD, University of Texas at Austin, 1980

Tara A Smith, Professor  
Department of Philosophy  
PhD, Johns Hopkins University, 1990

Rupert Snell, Professor  
Department of Asian Studies  
PhD, University of London, 1984

Carlos A Sole, Professor Emeritus  
Department of Spanish and Portuguese

PhD, Georgetown University, 1966

Yolanda Sole, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, Georgetown University, 1966

David Solodkow, Lecturer  
Teresa Lozano Long Institute of Latin American Studies  
PhD, Vanderbilt University, 2009

Patricia Ann Somers, Associate Professor  
Center for Women's and Gender Studies  
PhD, University of New Orleans, 1992

Stephen M Sonnenberg, Adjunct Professor  
Plan II Honors Program  
MD, Yeshiva University, 1965

Sandrine Sorlin, Visiting Associate Professor  
Department of English  
PhD, Ecole Normale Supérieure, 2006

Ernest D Sosa, Professor  
Louann and Larry Temple Centennial Professorship in the Humanities  
Department of Philosophy  
PhD, Princeton University, 1996

Bartholomew H Sparrow, Professor  
Department of Government  
PhD, University of Chicago, 1991

Lawrence W Speck, Professor  
The W. L. Moody, Jr. Centennial Professorship in Architecture  
Department of Geography and the Environment  
MArch, Massachusetts Institute of Technology, 1972

Shannon Speed, Associate Professor  
Department of Anthropology  
Center for Women's and Gender Studies  
PhD, University of California-Davis, 2001

Denise A Spellberg, Associate Professor  
Department of History  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
Department of Religious Studies  
PhD, Columbia University in the City of New York, 1989

Janet T Spence, Professor Emeritus  
Department of Psychology  
PhD, University of Iowa, 1949

Clay Spinuzzi, Associate Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, Iowa State University, 1999

James E Spivey, Senior Lecturer  
Department of Psychology  
PhD, University of Texas at Austin, 1964

David W Springer, Professor  
Department of Psychology  
PhD, Florida State University, 1997

Jeffrey F Staha, Professor-ROTC  
Department of Air Force Science

MA, Chapman University, 2001

Dale O Stahl, Professor  
Malcolm Forsman Centennial Professorship  
Department of Economics  
PhD, University of California-Berkeley, 1981

Janet Staiger, Professor  
William P. Hobby Centennial Professorship in Communication  
Center for Women's and Gender Studies  
PhD, University of Wisconsin-Madison, 1981

Thomas F Staley, Professor  
C. B. Smith, Sr., Nash Phillips, Clyde Copus Centennial Chair honoring  
Harry Hunt Ransom  
Department of English  
PhD, University of Pittsburgh, Pittsburgh Campus, 1962

Nancy K Stalker, Associate Professor  
Department of Asian Studies  
Department of History  
PhD, Stanford University, 2002

Dana Jalbert Stauffer, Lecturer  
Department of Government  
PhD, University of Toronto, 2005

Devin A Stauffer, Associate Professor  
Department of Government  
PhD, Boston College, 1998

Scott M Steiner, Adjunct Assistant Professor  
Department of Psychology  
PhD, University of Texas at Austin, 2002

Dwight D Steward, Senior Lecturer  
Department of Economics  
PhD, University of Iowa, 1995

Kathleen C Stewart, Professor  
Department of Anthropology  
PhD, University of Michigan-Ann Arbor, 1987

Eric M Stice, Adjunct Associate Professor  
Department of Psychology  
PhD, Arizona State University Main, 1996

Maxwell B Stinchcombe, Professor  
E. C. McCarty Centennial Professorship  
Department of Economics  
PhD, University of California-Berkeley, 1986

Michael B Stoff, Associate Professor  
Department of History  
PhD, Yale University, 1977

Bryan E Stone, Lecturer  
Schusterman Center for Jewish Studies  
PhD, University of Texas at Austin, 2003

William M Stott, Professor Emeritus  
Department of American Studies  
Department of English  
PhD, Yale University, 1972

Scott David Stout, Assistant Professor ROTC  
Department of Air Force Science

MBA, Touro University International, 2007

Sandra B Straubhaar, Senior Lecturer  
Department of Germanic Studies  
PhD, Stanford University, 1982

Jurgen K Streeck, Associate Professor  
Department of Anthropology  
Department of Germanic Studies  
PhD, Free University of Berlin, 1981

Pauline T Strong, Associate Professor  
Department of Anthropology  
Center for Women's and Gender Studies  
PhD, University of Chicago, 1992

Brian M Stross, Professor  
Department of Anthropology  
Center for Mexican American Studies  
PhD, University of California-Berkeley, 1969

Circe Dawn Sturm, Associate Professor  
Department of Anthropology  
PhD, University of California-Davis, 1997

Naoko Suito, Senior Lecturer  
Department of Asian Studies  
PhD, University of Texas at Austin, 1991

Paul V Sullivan, Lecturer  
Humanities Program  
PhD, University of Texas at Austin, 2005

Teresa A Sullivan, Professor Emeritus  
Department of Sociology  
PhD, University of Chicago, 1975

Jeremi Suri, Professor  
Department of History  
PhD, Yale University, 2001

Harvey M Sussman, Professor  
R. P. Doherty, Sr. Centennial Professorship in Communication  
Department of Linguistics  
PhD, University of Wisconsin-Madison, 1970

William Sutherland, Professor Emeritus  
Department of English  
PhD, University of North Carolina at Chapel Hill, 1950

M C Sutherland-Meier, Associate Professor  
Department of Spanish and Portuguese  
PhD, University of California-San Diego, 1983

Janet K Swaffar, Professor Emeritus  
Department of Germanic Studies  
Department of Germanic Studies  
PhD, University of Wisconsin-Madison, 1965

William B Swann, Professor  
William Howard Beasley III Professorship in the Graduate School of  
Business  
Department of Psychology  
PhD, University of Minnesota-Twin Cities, 1978

William S Swearingen, Lecturer  
Department of Sociology

PhD, University of Texas at Austin, 1997

Margaret A Syverson, Associate Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, University of California-San Diego, 1994

Cynthia M Talbot, Associate Professor  
Department of History  
Department of Asian Studies  
PhD, University of Wisconsin-Madison, 1988

Midori Tanaka, Lecturer  
Department of Asian Studies  
MA, University of Oregon, 1996

Eric Tang, Assistant Professor  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, New York University, 2006

Rabun M Taylor, Associate Professor  
Department of Classics  
PhD, University of Minnesota-Twin Cities, 1997

Jeremy M Teigen, Lecturer  
Department of Government  
PhD, University of Texas at Austin, 2005

Michael J Telch, Professor  
Department of Psychology  
PhD, Stanford University, 1982

Wen-Hua Teng, Senior Lecturer  
Department of Asian Studies  
PhD, University of Texas at Austin, 1990

Sean M Theriault, Associate Professor  
Department of Government  
PhD, Stanford University, 2001

Delbert D Thiessen, Professor Emeritus  
Department of Psychology  
PhD, University of California-Berkeley, 1963

Caroline Desiree Thomas, Assistant Professor  
Department of Economics  
MSc, University College London, 2004

Henry G Thomas, Adjunct Assistant Professor  
Plan II Honors Program  
MAEd, Harvard University, 1974

Shirley E Thompson, Associate Professor  
Department of American Studies  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, Harvard University, 2001

Aaron Gregory Thurow, Lecturer  
Thomas Jefferson Center for the Study of Core Texts  
PhD, University of Dallas, 2010

Helene Tissieres, Associate Professor  
Department of French and Italian  
Center for Middle Eastern Studies  
PhD, New York University, 2000

Sheridan Titman, Professor  
Walter W. McAllister Centennial Chair in Financial Services  
Department of Economics  
PhD, Carnegie Mellon University, 1981

Jeffrey B Titus, Clinical Assistant Professor  
Department of Psychology  
PhD, Ball State University, 2002

Irene Potocki Tobis, Clinical Assistant Professor  
Department of Psychology  
PhD, University of Wisconsin-Madison, 1990

Janice S Todd, Professor  
Center for Women's and Gender Studies  
PhD, University of Texas at Austin, 1995

Almeida J Toribio, Professor  
Department of Spanish and Portuguese  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Cornell University, 1993

Rebecca M Torres, Assistant Professor  
Department of Geography and the Environment  
PhD, University of California-Davis, 2000

John W Traphagan, Associate Professor  
Department of Religious Studies  
Department of Asian Studies  
Department of Anthropology  
PhD, University of Pittsburgh, Pittsburgh Campus, 1997

Dnika J Travis, Assistant Professor  
John L Warfield Center for African and African American Studies  
PhD, University of Southern California, 2006

Stephen J Trejo, Associate Professor  
Department of Economics  
PhD, University of Chicago, 1988

Justin R Tremel, Lecturer  
Department of English  
PhD, University of Texas at Austin, 2011

Eliot Michael Tretter, Lecturer  
Department of Geography and the Environment  
PhD, Johns Hopkins University, 2004

Matthew David Tribbe, Lecturer  
Department of History  
PhD, University of Texas at Austin, 2010

John R Trimble, Professor Emeritus  
Department of English  
Department of Rhetoric and Writing  
PhD, University of California-Berkeley, 1971

Brian M Trinqué, Lecturer  
Department of Economics  
PhD, University of Texas at Austin, 1993

Peter Trubowitz, Professor  
Department of Government  
PhD, University of Houston, 1986

Chien-Hsin Tsai, Assistant Professor



Department of Asian Studies  
PhD, Harvard University, 2009

Roberta Tsukahara, Adjunct Assistant Professor  
Department of Psychology  
PhD, Northeastern University, 1994

Aviezer Moshe Tucker, Lecturer  
Center for European Studies  
PhD, University of Maryland College Park, 1992

David M Tucker, Adjunct Associate Professor  
Department of Psychology  
Department of Psychology  
PhD, University of Georgia, 1983

Elliot Max Tucker-Drob, Assistant Professor  
Department of Psychology  
PhD, University of Virginia, 2009

Veronika Tuckerova, Lecturer  
Department of Slavic and Eurasian Studies  
PhD, Columbia University in the City of New York, 2011

Jeffrey K Tulis, Associate Professor  
Department of Government  
PhD, University of Chicago, 1982

William A Tully, Professor  
Eugene C. Barker Centennial Professorship in American History  
Department of History  
PhD, Johns Hopkins University, 1973

Thomas A Tweed, Professor  
The Gwyn Shive, Anita Nordan Lindsay and Joe & Cherry Gray  
Professorship  
Department of Religious Studies  
PhD, Stanford University, 1989

Ann Twinam, Professor  
Department of History  
PhD, Yale University, 1976

Robert G Twombly, Associate Professor Emeritus  
Department of English  
PhD, Yale University, 1965

Michael Tye, Professor  
Dallas TACA Centennial Professorship in the Liberal Arts  
Department of Philosophy  
PhD, New York University, 1975

Kathleen Raye Tyner, Associate Professor  
Center for Women's and Gender Studies  
MA, San Francisco State University, 1986

Antonio Ugalde, Professor Emeritus  
Department of Sociology  
PhD, Stanford University, 1969

Debra J Umberson, Professor  
Christie and Stanley E. Adams, Jr. Centennial Professorship in Liberal  
Arts  
Department of Sociology  
PhD, Vanderbilt University, 1985

Gary N Underwood, Associate Professor Emeritus

Department of English  
PhD, University of Minnesota-Twin Cities, 1970

Madhavan R Unnithan, Lecturer  
Department of Asian Studies  
PhD, University of Kerala, 1980

Per K Urlaub, Assistant Professor  
Department of Germanic Studies  
PhD, Stanford University, 2008

Luis Urrieta, Associate Professor  
Center for Mexican American Studies  
PhD, University of North Carolina at Chapel Hill, 2003

Alex Valadka, Adjunct Professor  
Department of Psychology  
MD, University of Chicago, 1987

Fred Valdez, Professor  
Department of Anthropology  
PhD, Harvard University, 1987

Matthew T Valentine, Lecturer  
Plan II Honors Program  
MFA, New York University, 2003

Angela Valenzuela, Professor  
Center for Mexican American Studies  
PhD, Stanford University, 1990

Kristin J Van engen, Lecturer  
Department of Linguistics  
PhD, Northwestern University, 2010

Tom Van malssen, Lecturer  
Thomas Jefferson Center for the Study of Core Texts  
PhD, Ludwig-Maximilian-University of Munich, 2011

Herman H Van Olphen, Professor Emeritus  
Department of Asian Studies  
PhD, University of Texas at Austin, 1970

Vincent Vanderheijden, Lecturer  
Department of Germanic Studies  
PhD, University of Texas at Austin, 2011

Joao H Vargas, Associate Professor  
Department of Anthropology  
Department of African and African Diaspora Studies  
John L Warfield Center for African and African American Studies  
PhD, University of San Diego, 1999

James Martin Vaughn, Assistant Professor  
Department of History  
PhD, University of Chicago, 2008

Gustavo Vega Canovas, Visiting Professor  
Teresa Lozano Long Institute of Latin American Studies  
PhD, Yale University, 1991

Robert Vega, Lecturer  
Humanities Program  
MA, Boston University, 1996

Thomas R Vessely, Senior Lecturer  
Department of French and Italian

PhD, Indiana University at Bloomington, 1979

Anthony John Vigorito, Lecturer  
Department of Sociology  
PhD, Ohio State U Main Campus, 2002

Andrew Villalon, Senior Lecturer  
Department of History  
PhD, Yale University, 1984

Andres Villarreal, Associate Professor  
Department of Sociology  
PhD, University of Chicago, 2002

Gregory J Vincent, Professor  
W. K. Kellogg Professorship of Community College Leadership  
John L Warfield Center for African and African American Studies  
EdD, University of Pennsylvania, 2004

Kamala Visweswaran, Associate Professor  
Department of Anthropology  
Department of Asian Studies  
PhD, Stanford University, 1990

Maria D Wade, Associate Professor  
Department of Anthropology  
PhD, University of Texas at Austin, 1998

Warwick P Wadlington, Professor Emeritus  
Department of English  
PhD, Tulane University, 1967

Edward L Walker, Adjunct Professor  
Plan II Honors Program  
MBA, Harvard University, 1967

Jeffrey Walker, Professor  
Department of Rhetoric and Writing  
Department of English  
PhD, University of California-Berkeley, 1985

Juliet E Walker, Professor  
Department of History  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of Chicago, 1976

Robert E Wall, Professor Emeritus  
Department of Linguistics  
PhD, Harvard University, 1961

Peter Ward, Professor  
C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #4  
Department of Sociology  
Department of Geography and the Environment  
PhD, University of Liverpool, 1976

Eric M Warr, Professor  
Department of Sociology  
PhD, University of Arizona, 1979

Samuel C Watkins, Associate Professor  
Department of African and African Diaspora Studies  
PhD, University of Michigan-Ann Arbor, 1994

Stephen M Wechsler, Professor  
Department of Linguistics

PhD, Stanford University, 1991

Sarah R Weddington, Adjunct Professor  
Department of Government  
LLB, University of Texas at Austin, 1967

David C Weigle, Adjunct Assistant Professor  
Department of Psychology  
PhD, Texas A & M University, 2001

Alexander Ariel Weinreb, Associate Professor  
Department of Sociology  
PhD, University of Pennsylvania, 2000

Amelia Gabrielle Weinreb, Lecturer  
Department of Anthropology  
PhD, University of Pennsylvania, 2007

John M Weinstock, Professor Emeritus  
Department of Germanic Studies  
PhD, University of Wisconsin-Madison, 1967

Jo Lynn Westbrook, Associate Professor  
Center for Women's and Gender Studies  
PhD, University of Michigan-Ann Arbor, 1995

Alexandra K Wettlaufer, Associate Professor  
Department of French and Italian  
Plan II Honors Program  
PhD, Columbia University in the City of New York, 1993

Walter D Wetzels, Professor Emeritus  
Department of Germanic Studies  
PhD, Princeton University, 1968

David A Wevill, Professor Emeritus  
Department of English  
Department of English  
MA, University of Cambridge, 1957

Kurt G Weyland, Professor  
Joe R. & Teresa Lozano Long Endowed Professorships  
Department of Government  
PhD, Stanford University, 1991

Shane O Whalley, Lecturer  
Center for Women's and Gender Studies  
MSSW, University of Texas at Austin, 2003

K C Wheelock, Professor Emeritus  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 1966

Frank F Whigham, Professor  
Arthur J. Thaman and Wilhelmina Dore' Thaman Endowed  
Professorship in English #2  
Department of English  
PhD, University of California-San Diego, 1975

Andrew B Whinston, Professor  
Hugh Roy Cullen Centennial Chair in Business Administration  
Department of Economics  
PhD, Carnegie Mellon University, 1962

Thomas B Whitbread, Professor  
Department of English  
PhD, Harvard University, 1959

Barbara W White, Professor  
Centennial Professorship in Leadership for Community, Professional,  
and Corporate Excellence  
John L Warfield Center for African and African American Studies  
PhD, Florida State University, 1986

Deborah E White, Lecturer  
Department of Linguistics  
MA, Gallaudet University, 1993

L M White, Professor  
The Ronald Nelson Smith Chair in Classics & Christian Origins  
Department of Religious Studies  
Department of Classics  
PhD, Yale University, 1982

Stephen A White, Professor  
Department of Classics  
Department of Philosophy  
PhD, University of California-Berkeley, 1987

Walter Wilczynski, Adjunct Professor  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 1978

Karin G Wilkins, Professor  
Center for Middle Eastern Studies  
Department of Middle Eastern Studies  
PhD, University of Pennsylvania, 1991

Lynn R Wilkinson, Associate Professor  
Department of Germanic Studies  
Center for Women's and Gender Studies  
PhD, University of California-Berkeley, 1983

Jennifer M Wilks, Associate Professor  
Department of English  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, Cornell University, 2003

Christine L Williams, Professor  
Department of Sociology  
Center for Women's and Gender Studies  
PhD, University of California-Berkeley, 1986

Elizabeth S Wilson, Lecturer  
Department of English  
MA, University of Auckland, 1981

Robert H Wilson, Professor  
Mike Hogg Professorship of Urban Policy  
Department of Geography and the Environment  
PhD, University of Pennsylvania, 1979

Samuel M Wilson, Professor  
Department of Anthropology  
PhD, University of Chicago, 1986

James I Wimsatt, Professor Emeritus  
Department of English  
PhD, Duke University, 1964

Michael B Winship, Professor  
Iris Howard Regents Professorship in English Literature #2  
Department of English

DPhil, University of Oxford, 1990

William J Winslade, Adjunct Professor  
Department of Philosophy  
Plan II Honors Program  
PhD, Northwestern University, 1967

Thomas E Wiseman, Associate Professor  
Department of Economics  
PhD, Northwestern University, 2001

Zipporah B Wiseman, Professor  
Thos. H. Law Centennial Professorship in Law  
Center for Women's and Gender Studies  
LLB, Yale University, 1954

Hannah Chapelle Wojciehowski, Associate Professor  
Department of English  
PhD, Yale University, 1984

Michael Scott Wolford, Assistant Professor  
Department of Government  
PhD, Emory University, 2008

Seth L Wolitz, Professor Emeritus  
Department of French and Italian  
Department of Slavic and Eurasian Studies  
PhD, Yale University, 1965

Helena Woodard, Associate Professor  
Department of English  
John L Warfield Center for African and African American Studies  
Department of African and African Diaspora Studies  
PhD, University of North Carolina at Chapel Hill, 1991

Robert D Woodberry, Assistant Professor  
Department of Sociology  
PhD, University of North Carolina at Chapel Hill, 2004

Anthony C Woodbury, Professor  
Department of Linguistics  
Department of Anthropology  
PhD, University of California-Berkeley, 1981

Paul B Woodruff, Professor  
Darrell K Royal Regents Professorship in Ethics and American Society  
Department of Philosophy  
Department of Classics  
PhD, Princeton University, 1973

Marjorie C Woods, Professor  
Jane and Roland Blumberg Centennial Professorship in English  
Department of English  
PhD, University of Toronto, 1977

Jacqueline D Woolley, Professor  
Department of Psychology  
PhD, University of Michigan-Ann Arbor, 1990

Samuel G Workman, Assistant Professor  
Department of Government  
PhD, University of Washington - Seattle, 2009

Tracy A Wuster, Lecturer  
Department of English  
PhD, University of Texas at Austin, 2011

Harold A Wylie, Associate Professor Emeritus  
Department of French and Italian  
John L Warfield Center for African and African American Studies  
PhD, Stanford University, 1965

Charters S Wynn, Associate Professor  
Department of History  
Department of Slavic and Eurasian Studies  
PhD, Stanford University, 1987

Haiqing Xu, Assistant Professor  
Department of Economics  
PhD, Pennsylvania State University Park, 2011

David Scott Yeager, Assistant Professor  
Department of Psychology  
PhD, Stanford University, 2011

Dean H Young, Professor  
William S. Livingston Endowed Chair in Writing  
Department of English  
MFA, Indiana University at Bloomington, 1984

Kenneth R Young, Professor  
Department of Geography and the Environment  
Teresa Lozano Long Institute of Latin American Studies  
PhD, University of Colorado at Boulder, 1990

Michael P Young, Associate Professor  
Department of Sociology  
PhD, New York University, 2000

Wei-Hsin Yu, Associate Professor  
Department of Sociology  
PhD, University of Chicago, 1999

Janie Zackin, Lecturer  
Department of Spanish and Portuguese  
PhD, University of Texas at Austin, 2008

Emilio Zamora, Professor  
Department of History  
Center for Mexican American Studies  
PhD, University of Texas at Austin, 1983

Abraham Zilkha, Associate Professor Emeritus  
Department of Middle Eastern Studies  
PhD, University of Texas at Austin, 1970

Stanislav Zimic, Professor  
Department of Spanish and Portuguese  
PhD, Duke University, 1964

Larisa Zlatic, Lecturer  
Department of Slavic and Eurasian Studies  
PhD, University of Texas at Austin, 1997

Leo Edward Zonn, Professor  
Department of Geography and the Environment  
PhD, University of Wisconsin-Milwaukee, 1975

## College of Natural Sciences Faculty

John Abbott, Senior Lecturer  
School of Biological Sciences  
PhD, University of North Texas, 1999

Meena D Adhikary, Specialist  
Department of Human Development and Family Sciences  
MEd, University of Texas at Austin, 1990

Seema Agarwala, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, State University of New York at Stony Brook, 1990

J K Aggarwal, Professor  
Cullen Trust for Higher Education Endowed Professorship in  
Engineering #2  
Department of Computer Science  
PhD, University of Illinois at Urbana-Champaign, 1964

Karin L Akre, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2010

Teri J Albrecht, Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 2007

Richard W Aldrich, Professor  
Karl Folkers Chair in Interdisciplinary Biomedical Research II  
Section of Neurobiology  
PhD, Stanford University, 1980

Daniel J Allcock, Professor  
Department of Mathematics  
PhD, University of California-Berkeley, 1996

Arthur W Allen, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1998

Kelli Rae Allen, Clinical Assistant Professor  
UTeach-Natural Sciences  
MS, Pittsburg State University, 1998

Orly Alter, Adjunct Associate Professor  
Department of Mathematics  
PhD, Stanford University, 1999

Lorenzo Alvisi, Professor  
Department of Computer Science  
PhD, Cornell University, 1996

Natalie Younok Ammon, Specialist  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 2011

Edward R Anderson, Associate Professor  
Department of Human Development and Family Sciences  
PhD, University of Virginia, 1989

Susan E Anderson, Specialist  
Department of Chemistry and Biochemistry  
MA, University of Texas at Austin, 2009



Eric V Anslyn, Professor  
Norman Hackerman Professorship in Chemistry  
Department of Chemistry and Biochemistry  
PhD, California Institute of Technology, 1988

Peter R Antoniewicz, Professor  
Department of Physics  
PhD, Purdue University Main Campus, 1965

Dean R Appling, Professor  
Lester J. Reed Professorship in Biochemistry  
Department of Chemistry and Biochemistry  
PhD, Vanderbilt University, 1981

Todd J Arbogast, Professor  
Department of Mathematics  
PhD, University of Chicago, 1987

Alexander Michael Arispe, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Texas at Austin, 2010

Jane Arledge, Lecturer  
Department of Mathematics  
PhD, University of Colorado at Boulder, 1995

Efraim P Armendariz, Professor  
Department of Mathematics  
PhD, University of Nebraska - Lincoln, 1966

Connie R Arnold, Professor Emeritus  
Department of Marine Science  
PhD, Texas A & M University, 1968

Karen J Artzt, Professor Emeritus  
Section of Molecular Genetics and Microbiology  
PhD, Weill Medical College of Cornell University, 1972

William Franklin Aspray, Professor  
Bill and Lewis Suit Professorship  
Department of Computer Science  
PhD, University of Wisconsin Colleges, 1980

Nigel S Atkinson, Professor  
Section of Neurobiology  
PhD, Pennsylvania State University Main Campus, 1986

Jennifer Katherine Mann Austin, Lecturer  
Department of Mathematics  
MS, Florida State University, 2002

Ivo M Babuska, Professor  
Robert B. Trull Chair in Engineering  
Department of Mathematics  
PhD, Academy of Sciences, 1955

Joshua Dana Baer, Specialist  
Department of Computer Science  
BS, Carnegie Mellon University, 1999

Chandrajit L Bajaj, Professor  
CAM Chair in Visualization  
Department of Computer Science  
PhD, Cornell University, 1984

Dana Harry Ballard, Professor  
Department of Computer Science

PhD, University of California-Irvine, 1974

Gerard Barbanson, Adjunct Professor  
Department of Mathematics  
PhD, Universite Louis Pasteur, Strasbourg I, 1975

Allen J Bard, Professor  
Norman Hackerman - Welch Regents Chair in Chemistry  
Department of Chemistry and Biochemistry  
PhD, Harvard University, 1958

Alexander M Barr, Lecturer  
College of Natural Sciences  
BS, University of Illinois at Urbana-Champaign, 2003

Jeffrey E Barrick, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, Yale University, 2006

Suzanne S Barth, Adjunct Associate Professor  
School of Biological Sciences  
PhD, University of Texas at Austin, 1983

Frank N Bash, Professor Emeritus  
Department of Astronomy  
PhD, University of Virginia (Old Code), 1967

Don S Batory, Professor  
David Bruton, Jr. Centennial Professorship in Computer Sciences #1  
Department of Computer Science  
PhD, University of Toronto, 1981

John C Batterton, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1970

Nathan L Bauld, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, University of Illinois at Urbana-Champaign, 1959

Mark C Baumann, Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 2011

Josh T Beckham, Specialist  
College of Natural Sciences  
PhD, Vanderbilt University, 2008

Mary R Beckham, Adjunct Assistant Professor  
Section of Molecular Genetics and Microbiology  
MEd, University of Mary Hardin-Baylor, 1998

William Beckner, Professor  
Paul V. Montgomery Centennial Memorial Professorship in  
Mathematics  
Department of Mathematics  
PhD, Princeton University, 1975

Ockhee Bego, Lecturer  
Division of Textiles and Apparel  
MFA, Academy of Art University, 2010

David D Ben-Zvi, Associate Professor  
Department of Mathematics  
PhD, Harvard University, 1999

George F Benedict, Senior Lecturer  
Department of Astronomy

PhD, Northwestern University, 1972

Roger D Bengtson, Professor  
Department of Physics  
PhD, University of Maryland College Park, 1968

Aprile D Benner, Assistant Professor  
Department of Human Development and Family Sciences  
PhD, University of California-Los Angeles, 2007

Sterling K Berberian, Professor Emeritus  
Department of Mathematics  
PhD, University of Chicago, 1955

Gary D Berg, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 1996

Herbert L Berk, Professor  
Department of Physics  
PhD, Princeton University, 1964

Vertica Bhardwaj, Lecturer  
Division of Textiles and Apparel  
PhD, University of Tennessee, 2010

Klaus R Bichteler, Professor  
Department of Mathematics  
PhD, University of Hamburg, 1965

Christopher W Bielawski, Professor  
Department of Chemistry and Biochemistry  
PhD, California Institute of Technology, 2003

Mark W Bierner, Senior Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1971

Adam J Billman, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Texas at Austin, 2010

George Biros, Professor  
W. A. "Tex" Moncrief, Jr. Endowment in Simulation-Based Engineering  
and Sciences - Endowed Chair No. 2  
Department of Computer Science  
PhD, Carnegie Mellon University, 2000

George D Bittner, Professor  
Section of Neurobiology  
PhD, Stanford University, 1967

Andrew Justin Blumberg, Assistant Professor  
Department of Mathematics  
PhD, University of Chicago, 2005

Olena Blumberg, Lecturer  
Department of Mathematics  
PhD, Stanford University, 2011

James E Boggs, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, University of Michigan-Ann Arbor, 1953

Arno R Bohm, Professor  
Department of Physics  
PhD, Philipps-University of Marburg, 1966

John R Boisseau, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 1996

Daniel I Bolnick, Associate Professor  
Section of Integrative Biology  
PhD, University of California-Davis, 2003

Haran Boral, Adjunct Associate Professor  
Department of Computer Science  
PhD, University of Wisconsin-Madison, 1981

Erika Borden, Lecturer  
School of Biological Sciences  
PhD, North Carolina State University, 2005

Jacek I Borysow, Adjunct Professor  
Department of Physics  
PhD, University of Texas at Austin, 1986

Henry R Bose, Professor  
Mary M. Betzner Morrow Centennial Chair in Microbiology  
Section of Molecular Genetics and Microbiology  
PhD, Indiana University at Bloomington, 1967

Lisa Diane Boucher, Lecturer  
School of Biological Sciences  
PhD, Ohio State U Main Campus, 1995

Robert S Boyer, Professor Emeritus  
Department of Computer Science  
PhD, University of Texas at Austin, 1971

Jerry J Brand, Professor  
Jack S. Josey Professorship in Energy Studies  
Section of Molecular Cell and Developmental Biology  
PhD, Purdue University Main Campus, 1971

Karen Marie Bravo, Lecturer  
Division of Textiles and Apparel  
MA, Central Saint Martins College of Art and Design, 2004

Michel Breger, Adjunct Professor  
Department of Astronomy  
PhD, University of California-Berkeley, 1969

Boris Breizman, Research Professor (Affiliated)  
Department of Physics  
PhD, Budker Institute of Nuclear Physics, 1971

Margaret E Briley, Professor  
Department of Nutritional Sciences  
PhD, Texas Tech University, 1973

Patrick L Brockett, Professor  
Gus Wortham Memorial Chair in Risk Management and Insurance  
Department of Mathematics  
PhD, University of California-Irvine, 1975

Jennifer S Brodbelt, Professor  
William H. Wade Endowed Professorship in Chemistry  
Department of Chemistry and Biochemistry  
PhD, Purdue University Main Campus, 1988

Volker Bromm, Associate Professor  
Department of Astronomy  
PhD, Yale University, 2000

Franklin H Bronson, Professor  
Section of Integrative Biology  
PhD, Pennsylvania State University Main Campus, 1961

Richard M Brown, Professor  
Johnson & Johnson Centennial Chair in Plant Cell Biology  
Section of Molecular Genetics and Microbiology  
PhD, University of Texas at Austin, 1964

James C Browne, Professor Emeritus  
Department of Computer Science  
PhD, University of Texas at Austin, 1960

Karen S Browning, Associate Professor  
Department of Chemistry and Biochemistry  
PhD, University of Illinois at Urbana-Champaign, 1980

Amy E Bryan, Lecturer  
Department of Human Development and Family Sciences  
MSSW, University of Texas at Austin, 2000

James T Bryant, Lecturer  
School of Biological Sciences  
PhD, Tex Hlth Sci C Dallas, U, 2000

James J Bull, Professor  
Johann Friedrich Miescher Regents Professorship in Molecular Biology  
Section of Integrative Biology  
PhD, University of Utah, 1977

Mary J Burson-Polston, Lecturer  
Department of Human Development and Family Sciences  
MS, Colorado State University, 1979

Thomas J Bushart, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2007

Edward J Buskey, Professor  
Department of Marine Science  
PhD, University of Rhode Island, 1983

Ruth E Buskirk, Distinguished Senior Lecturer  
School of Biological Sciences  
PhD, University of California-Davis, 1972

Elena Caceres, Adjunct Professor  
Department of Physics  
PhD, University of Texas at Austin, 1996

Luis A Caffarelli, Professor  
Sid W. Richardson Foundation Regents Chair in Mathematics #1  
Department of Mathematics  
PhD, University of Buenos Aires, 1972

Prudence Marie Cain, Clinical Assistant Professor  
UTeach-Natural Sciences  
MS, West Texas A&M University, 1983

Alan Campion, Professor  
Dow Chemical Company Endowed Professorship in Chemistry  
Department of Chemistry and Biochemistry  
PhD, University of California-Los Angeles, 1977

Marion Moore Campisi, Instructor  
Department of Mathematics  
PhD, University of California-Davis, 2010

Phillip E Cannata, Adjunct Professor  
Department of Computer Science  
PhD, University of Notre Dame, 1980

David Cannatella, Professor  
Section of Integrative Biology  
PhD, University of Kansas Main Campus, 1986

Maria-Cristina Caputo, Lecturer  
Department of Mathematics  
PhD, Columbia University in the City of New York, 2006

Gustavo E Cepparo, Lecturer  
Department of Mathematics  
MS, Kansas State University, 1999

Clarence S Chan, Associate Professor  
Section of Molecular Genetics and Microbiology  
Section of Molecular Cell and Developmental Biology  
PhD, Cornell University, 1985

James R Chelikowsky, Professor  
W. A. "Tex" Moncrief, Jr. Chair in Computational Materials  
Department of Physics  
Department of Chemistry and Biochemistry  
PhD, University of California-Berkeley, 1975

Jonathan Yan Chen, Professor  
Division of Textiles and Apparel  
School of Human Ecology  
PhD, University of Leeds, 1995

Thomas Chen, Assistant Professor  
Department of Mathematics  
PhD, Swiss Federal Institute of Technology, 2001

Zengjian J Chen, Professor  
D. J. Sibley Centennial Professorship in Plant Molecular Genetics  
Section of Molecular Cell and Developmental Biology  
PhD, Texas A & M University, 1993

Elliott W Cheney, Professor Emeritus  
Department of Mathematics  
PhD, University of Kansas Main Campus, 1957

Sheree D Cherry, Lecturer  
School of Biological Sciences  
PhD, University of Tennessee Health Science Center, 2009

Antonia Chimonidou, Lecturer  
Department of Physics  
PhD, University of Texas at Austin, 2009

Brenda J Chinnery-Allgeier, Lecturer  
School of Biological Sciences  
PhD, Johns Hopkins University, 2002

Raymond A Chitwood, Lecturer  
School of Biological Sciences  
PhD, University of Texas at San Antonio, 2000

Charles B Chiu, Professor  
Department of Physics  
PhD, University of California-Berkeley, 1966

Grace Choy, Lecturer  
College of Natural Sciences

PhD, Carnegie Mellon University, 2003

Chia-Chieh Chu, Instructor  
Department of Mathematics  
PhD, California Institute of Technology, 2010

Mirela Ciperiani, Assistant Professor  
Department of Mathematics  
PhD, Princeton University, 2006

Gregory B Clark, Senior Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 1992

Alan K Cline, Professor  
David Bruton, Jr. Centennial Professorship in Computer Sciences #2  
Department of Computer Science  
Department of Mathematics  
PhD, University of Michigan-Ann Arbor, 1970

William R Coker, Professor  
Department of Physics  
PhD, University of Georgia, 1966

John A Colapret, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1983

Laura Lee Colgin, Assistant Professor  
Section of Neurobiology  
PhD, University of California-Irvine, 2003

Sarah M Collins, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2010

Maxwell Colonna, Specialist  
School of Biological Sciences  
BSBio, University of Texas at Austin, 2011

William R Cook, Associate Professor  
Department of Computer Science  
PhD, Brown University, 1989

Arthur Wesley Covert, Specialist  
College of Natural Sciences  
PhD, Michigan State University, East Lansing, 2010

Alan H Cowley, Professor  
The Robert A. Welch Chair in Chemistry  
Department of Chemistry and Biochemistry  
PhD, University of Manchester, 1958

Matthew C Cowperthwaite, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2008

Jane S Craig, Senior Lecturer  
Division of Textiles and Apparel  
PhD, Texas Tech University, 1993

David P Crews, Professor  
Section of Integrative Biology  
PhD, Rutgers the State University of New Jersey Newark Campus,  
1973

Richard M Crooks, Professor  
The Robert A. Welch Chair in Chemistry (Materials Chemistry)

Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1987

Milica Cudina, Clinical Assistant Professor  
Department of Mathematics  
PhD, Carnegie Mellon University, 2006

Molly E Cummings, Associate Professor  
Section of Integrative Biology  
PhD, University of California-Santa Barbara, 2001

Suzanne R Curtis, Lecturer  
Department of Nutritional Sciences  
PhD, Oregon State University, 2001

Anson D'Aloisio, Specialist  
College of Natural Sciences  
PhD, Yale University, 2011

Michael D Dahlin, Professor  
Department of Computer Science  
PhD, University of California-Berkeley, 1995

Jeffrey E Danciger, Instructor  
Department of Mathematics  
PhD, Stanford University, 2011

James W Daniel, Professor Emeritus  
Department of Mathematics  
PhD, Stanford University, 1965

Mark L Daniels, Clinical Associate Professor  
UTeach-Natural Sciences  
EdD, Walden University, 2007

Michael Zachary Darnell, Lecturer  
Department of Marine Science  
PhD, Duke University, 2009

Nicola M Davies, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2006

Jaimie N Davis, Assistant Professor  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 2004

Katherine M Davis, Associate Professor  
Department of Mathematics  
PhD, Cornell University, 1974

Leah Davis, Specialist  
College of Natural Sciences  
MA, University of Texas at Austin, 2006

Raymond E Davis, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, Yale University, 1965

Mary E Dawson, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2007

Alejandro L De Lozanne, Professor  
Department of Physics  
PhD, Stanford University, 1982

Arturo De Lozanne, Associate Professor



Section of Molecular Cell and Developmental Biology  
PhD, Stanford University, 1988

Scott J Dee, Lecturer  
Department of Chemistry and Biochemistry  
PhD, Baylor University, 2010

Linda Ann deGraffenried, Associate Professor  
Department of Nutritional Sciences  
PhD, University of Texas Health Science Center at San Antonio, 2001

Theodore Delevoryas, Professor Emeritus  
Section of Integrative Biology  
PhD, University of Illinois at Urbana-Champaign, 1954

Cassandra Veronica Delgado-Reyes, Specialist  
College of Natural Sciences  
PhD, University of Illinois at Urbana-Champaign, 2003

Alexander A Demkov, Associate Professor  
Department of Physics  
PhD, Arizona State University Main, 1995

Leszek F Demkowicz, Professor  
Department of Mathematics  
PhD, Cracow Univ of Technology, 1982

F W Dewette, Professor Emeritus  
Department of Physics  
PhD, Utrecht University, 1959

Cecile M Dewitt, Professor Emeritus  
Department of Physics  
PhD, University of Paris IV, Sorbonne, 1947

Inderjit S Dhillon, Professor  
Department of Computer Science  
PhD, University of California-Berkeley, 1997

Duane A Dicus, Professor  
Department of Physics  
PhD, University of California-Los Angeles, 1968

John Digiovanni, Professor  
Department of Nutritional Sciences  
PhD, University of Washington - Seattle, 1978

Sandra J Dillon, Specialist  
Department of Human Development and Family Sciences  
MA, University of Texas at Austin, 1987

Harriet L Dinerstein, Professor  
Department of Astronomy  
PhD, University of California-Santa Cruz, 1980

Jacques Distler, Professor  
Department of Physics  
PhD, Harvard University, 1987

Todd Ditmire, Professor  
Department of Physics  
PhD, University of California-Davis, 1995

Theodore H Dix, Associate Professor  
Department of Human Development and Family Sciences  
PhD, Northwestern University, 1980

Sarah E Dodson-Robinson, Assistant Professor

Department of Astronomy  
MS, University of California-Santa Cruz, 2005

John D Dollard, Professor  
Department of Mathematics  
PhD, Princeton University, 1963

Kirstin Danielle Doney, Specialist  
Department of Chemistry and Biochemistry  
BSCh, University of Texas at Austin, 2011

Guangbin Dong, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, Stanford University, 2009

Michael W Downer, Professor  
Department of Physics  
PhD, Harvard University, 1983

Glenn P Downing, Lecturer  
Department of Computer Science  
MS, Massachusetts Institute of Technology, 1977

Justin Michael Dragna, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 2011

Moon Draper, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2005

Michael Drew, Assistant Professor  
Section of Neurobiology  
PhD, Columbia University in the City of New York, 2004

Jaquelin P Dudley, Professor  
Section of Molecular Genetics and Microbiology  
PhD, Baylor College of Medicine, 1978

Dennis P Dunn, Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 2002

Kenneth H Dunton, Professor  
Department of Marine Science  
PhD, University of Alaska Fairbanks, 1985

John R Durbin, Professor Emeritus  
Department of Mathematics  
PhD, University of Kansas Main Campus, 1964

Charles F Earhart, Professor Emeritus  
Section of Molecular Genetics and Microbiology  
PhD, Purdue University Main Campus, 1967

Paul Eastwick, Assistant Professor  
Department of Human Development and Family Sciences  
PhD, Northwestern University, 2009

David J Eaton, Professor  
Bess Harris Jones Centennial Professorship in Natural Resource  
Policy Studies  
Section of Integrative Biology  
PhD, Johns Hopkins University, 1977

Johann K Eberhart, Assistant Professor  
Section of Molecular Cell and Developmental Biology

PhD, University of Missouri - Columbia, 2002

Mary V Eberlein, Lecturer  
Department of Computer Science  
PhD, University of Tennessee, 1996

Don E Edmondson, Professor Emeritus  
Department of Mathematics  
PhD, California Institute of Technology, 1954

Lauren Ilyse richie Ehrlich, Assistant Professor  
Section of Molecular Genetics and Microbiology  
PhD, Stanford University, 2002

Victor L Eijkhout, Lecturer  
Division of Statistics and Scientific Computation  
PhD, Radboud Universiteit Nijmegen, 1990

Denise Diane Ekberg, Clinical Assistant Professor  
UTeach-Natural Sciences  
MS, University of Illinois at Urbana-Champaign, 1989

Sheldon Ekland-Olson, Professor  
Amy Johnson McLaughlin Administrative Chair in Human Ecology,  
Rapoport Centennial Professorship of Liberal Arts  
School of Human Ecology  
PhD, University of Washington - Seattle, 1971

Ron Elber, Professor  
W. A. "Tex" Moncrief, Jr. Chair in Computational Life Sciences and  
Biology  
Department of Chemistry and Biochemistry  
PhD, Hebrew University, 1985

Andrew Ellington, Professor  
Wilson M. and Kathryn Fraser Research Professorship in Biochemistry  
Department of Chemistry and Biochemistry  
PhD, Harvard University, 1988

Ernest A Emerson, Professor  
Regents Chair in Computer Sciences #2  
Department of Computer Science  
PhD, Harvard University, 1981

Michael Endl, Lecturer  
Department of Astronomy  
PhD, University of Vienna, 2001

Peter H English, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1998

Bjorn Engquist, Professor  
CAM Chair I  
Department of Mathematics  
PhD, Uppsala University, 1969

Deana L Erdner, Assistant Professor  
Department of Marine Science  
PhD, Massachusetts Institute of Technology, 1997

Nathan W Erickson, Lecturer  
Department of Physics  
PhD, University of Texas at Austin, 2011

Jason L Ermer, Clinical Assistant Professor  
UTeach-Natural Sciences

MEd, University of Texas at Austin, 2001

James L Erskine, Professor  
Trull Centennial Professorship in Physics #2  
Department of Physics  
PhD, University of Washington - Seattle, 1972

Liliana Espinosa De jaloudi, Specialist  
Department of Chemistry and Biochemistry  
BSCh, University of Texas at Austin, 2011

Neal J Evans, Professor  
Edward Randall, Jr., M.D. Centennial Professorship in Astronomy  
Department of Astronomy  
PhD, University of California-Berkeley, 1973

Fatima H Fakhreddine, Senior Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1999

Tatia S Feltman, Adjunct Assistant Professor  
Section of Molecular Genetics and Microbiology  
EdM, University of Houston - Downtown, 1994

Leanne H Field, Distinguished Senior Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1987

Gregory A Fiete, Assistant Professor  
Department of Physics  
PhD, Harvard University, 2003

Ila P Fiete, Assistant Professor  
Section of Neurobiology  
PhD, Harvard University, 2004

Alessio Figalli, Professor  
Department of Mathematics  
PhD, Scuola Normale of Pisa, 2007

Karen L Fingerman, Professor  
Department of Human Development and Family Sciences  
PhD, University of Michigan-Ann Arbor, 1993

Manfred Fink, Professor  
Department of Physics  
PhD, University Fridericiana Karlsruhe, 1966

Ilya Finkelstein, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, Stanford University, 2007

Beverly J Finklea, Lecturer  
School of Biological Sciences  
PhD, Texas A & M University, 2000

Richard H Finnell, Professor  
Department of Nutritional Sciences  
Department of Chemistry and Biochemistry  
PhD, Oregon Health and Science University, 1980

Janice A Fischer, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Harvard University, 1988

Willy Fischler, Professor  
Jane and Roland Blumberg Centennial Professorship in Physics  
Department of Physics

PhD, Vrije Universiteit Brussel, 1976

Richard Fitzpatrick, Professor  
Department of Physics  
PhD, University of Sussex, 1988

Conrad R Fjetland, Lecturer  
Department of Chemistry and Biochemistry  
PhD, New Mexico Institute of Mining and Technology, 1998

Ernst-Ludwig Florin, Associate Professor  
Department of Physics  
Center for Nonlinear Dynamics  
PhD, Technischen Universitat Munchen/Munich, 1995

Zachary T Fondren, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Texas at Austin, 2008

David W Fonken, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 1983

Gerhard J Fonken, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, University of California-Berkeley, 1957

Michele Forman, Professor  
David Bruton, Jr. Centennial Professorship in Nutrition  
Department of Nutritional Sciences  
PhD, University of North Carolina at Chapel Hill, 1977

Hugh S Forrest, Professor Emeritus  
Section of Neurobiology  
DSc, University of London, 1970

Brian S Fortney, Clinical Assistant Professor  
UTeach-Natural Sciences  
PhD, University of Texas at Austin, 2009

Norma L Fowler, Professor  
Section of Integrative Biology  
PhD, Duke University, 1978

Ruth A Franks, Senior Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2000

Daniel S Freed, Professor  
Department of Mathematics  
PhD, University of California-Berkeley, 1985

Jeanne H Freeland, Professor  
Bess Heflin Centennial Professorship in Nutritional Sciences  
Department of Nutritional Sciences  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 1975

Daniel Becker Freeman, Instructor  
Department of Mathematics  
PhD, Texas A & M University, 2009

Gary L Freeman, Professor Emeritus  
Section of Integrative Biology  
PhD, University of Chicago, 1964

Jennifer H Fritz, Lecturer  
School of Biological Sciences

PhD, University of Texas at Austin, 1997

Lothar W Frommhold, Professor Emeritus  
Department of Physics  
DRHABIL, University of Hamburg, 1961

Lee A Fuiman, Professor  
Perry R. Bass Chair in Fisheries and Mariculture  
Department of Marine Science  
Section of Integrative Biology  
PhD, University of Michigan-Ann Arbor, 1983

Robert Fulginiti, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1990

Donald S Fussell, Professor  
Trammell Crow Regents Professorship in Computer Science  
Department of Computer Science  
PhD, University of Texas at Dallas, 1980

Kelly P Gaither, Lecturer  
Division of Statistics and Scientific Computation  
PhD, Mississippi State University, 2000

Anna Gal, Associate Professor  
Department of Computer Science  
PhD, University of Chicago, 1995

Irene M Gamba, Professor  
Department of Mathematics  
PhD, University of Chicago, 1989

Clifford S Gardner, Professor Emeritus  
Department of Mathematics  
PhD, New York University, 1954

Wayne S Gardner, Professor  
Department of Marine Science  
PhD, University of Wisconsin Colleges, 1972

J D Gavenda, Professor Emeritus  
Department of Physics  
PhD, Brown University, 1959

Karl Gebhardt, Professor  
Herman and Joan Suit Professorship in Astrophysics  
Department of Astronomy  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 1994

Kenneth W Gentle, Professor  
Department of Physics  
PhD, Massachusetts Institute of Technology, 1966

George Georgiou, Professor  
Cockrell Family Regents Chair in Engineering #9  
Section of Molecular Genetics and Microbiology  
PhD, Cornell University, 1987

Elizabeth Thompson Gershoff, Associate Professor  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 1998

Mary C Gerwels, Senior Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 1994

Eman Ghanem, Specialist  
College of Natural Sciences  
PhD, Texas A & M University, 2006

Omar Nabih Ghattas, Professor  
John A. and Katherine G. Jackson Chair in Computational  
Geosciences  
Department of Computer Science  
PhD, Duke University, 1988

Ahmed Gheith, Adjunct Assistant Professor  
Department of Computer Science  
PhD, Georgia Institute of Technology, 1990

John C Gilbert, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, Yale University, 1965

John E Gilbert, Professor  
Department of Mathematics  
PhD, University of Oxford, 1963

Lawrence E Gilbert, Professor  
Section of Integrative Biology  
PhD, Stanford University, 1971

Ryan Reed Gillespie, Specialist  
School of Biological Sciences  
BS, Westminster College, 2002

Martha B Gillham, Associate Professor Emeritus  
Department of Nutritional Sciences  
PhD, Iowa State University, 1975

Youme Gim, Specialist  
School of Biological Sciences  
MA, University of Texas at Austin, 2011

Marci Elizabeth Joy Gleason, Assistant Professor  
Department of Human Development and Family Sciences  
PhD, New York University, 2004

Austin M Gleeson, Professor  
Department of Physics  
PhD, University of Pennsylvania, 1965

Bartley E Goddard, Lecturer  
Department of Mathematics  
PhD, University of Nebraska - Lincoln, 1989

Patrick G Goetz, Lecturer  
Department of Mathematics  
MS, University of Chicago, 1983

Randall Goldblum, Adjunct Professor  
Section of Molecular Genetics and Microbiology  
MD, University of Texas Medical Branch, 1969

Nace L Golding, Associate Professor  
Section of Neurobiology  
PhD, University of Wisconsin-Madison, 1996

Robert E Gompf, Professor  
Jane and Roland Blumberg Centennial Professorship in Mathematics  
Department of Mathematics  
PhD, University of California-Berkeley, 1984

Antonio Gonzalez, Specialist

College of Natural Sciences  
PhD, University of Texas at Austin, 2008

Oscar Gonzalez, Associate Professor  
Department of Mathematics  
PhD, Stanford University, 1996

Cameron M Gordon, Professor  
Sid W. Richardson Foundation Regents Chair in Mathematics #2  
Department of Mathematics  
PhD, University of Cambridge, 1971

Vernita Gordon, Assistant Professor  
Department of Physics  
PhD, Harvard University, 2003

Ellen Gottlieb, Assistant Professor  
Section of Molecular Genetics and Microbiology  
PhD, Yale University, 1987

Mohamed G Gouda, Professor  
Mike A. Myers Centennial Professorship in Computer Sciences  
Department of Computer Science  
PhD, Foreign Institution, 1977

Gail Grabner, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Illinois at Urbana-Champaign, 2002

David E Graham, Adjunct Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, University of Illinois at Urbana-Champaign, 2000

Hans Ulrich Grasemann, Specialist  
College of Natural Sciences  
PhD, University of Texas at Austin, 2010

Kristen L Grauman, Assistant Professor  
Department of Computer Science  
PhD, Massachusetts Institute of Technology, 2006

Christine Gray, Lecturer  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 2007

Sue A Greninger, Associate Professor  
Department of Human Development and Family Sciences  
PhD, University of Illinois at Urbana-Champaign, 1973

Thomas A Griffy, Professor Emeritus  
Department of Physics  
PhD, Rice University, 1961

Jeffrey Martin Gross, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Duke University, 2002

Maria Pia Gualdani, Research Assistant Professor (Affiliated)  
Department of Mathematics  
PhD, Johannes Gutenberg Universitat Mainz, 2005

Brandy J Guntel, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 2011

Robin Gutell, Professor  
Section of Integrative Biology



PhD, University of California-Santa Cruz, 1985

Jeffrey Robert Haack, Instructor  
Department of Mathematics  
PhD, University of Wisconsin-Madison, 2009

Marvin L Hackert, Professor  
William Shive Centennial Professorship in Biochemistry  
Department of Chemistry and Biochemistry  
PhD, Iowa State University, 1970

Ronny Hadani, Assistant Professor  
Department of Mathematics  
PhD, Tel Aviv University, 2006

Amanda Hager, Lecturer  
Department of Mathematics  
PhD, University of Iowa, 2010

Matthew T Haley, Lecturer  
Department of Physics  
PhD, University of Texas at Austin, 2011

Gary C Hamrick, Professor  
Department of Mathematics  
PhD, University of Virginia, 1971

Boyd A Hardesty, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, California Institute of Technology, 1960

Susan C Harkins, Lecturer  
College of Natural Sciences  
EdD, University of Pittsburgh, Pittsburgh Campus, 1998

Shinko K Harper, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 1997

Kristen M Harris, Professor  
Section of Neurobiology  
PhD, Northeastern Ohio Universities College of Medicine, 1982

R A Harris, Professor  
M. June and J. Virgil Waggoner Chair in Molecular Biology  
Section of Neurobiology  
PhD, University of North Carolina at Chapel Hill, 1973

Rasika M Harshey, Professor  
Section of Molecular Genetics and Microbiology  
PhD, Indian Institute of Science, 1977

Rachel N Hartnett, Specialist  
School of Biological Sciences  
BS, University of Texas at Austin, 2011

Jessica Hartos, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Houston, 1998

Rhonda K Hauser, Lecturer  
Department of Human Development and Family Sciences  
MA, University of Texas at Austin, 1986

Alisa N Havens, Lecturer  
Department of Mathematics  
MA, University of Texas at Austin, 2008

Christine Veronica Hawkes, Associate Professor  
Section of Integrative Biology  
PhD, University of Pennsylvania, 2000

Richard D Hazeltine, Professor  
Department of Physics  
PhD, University of Michigan-Ann Arbor, 1968

Nancy L Hazen-Swann, Associate Professor  
Department of Human Development and Family Sciences  
PhD, University of Minnesota-Twin Cities, 1979

Yuan He, Lecturer  
Department of Mathematics  
PhD, Columbia University in the City of New York, 2010

Daniel J Heinzen, Professor  
The Fondren Foundation Centennial Chair in Physics  
Department of Physics  
PhD, Massachusetts Institute of Technology, 1988

Raymond C Heitmann, Professor  
Department of Mathematics  
PhD, University of Wisconsin-Madison, 1974

David Frederick Helm, Assistant Professor  
Department of Mathematics  
PhD, University of California-Berkeley, 2003

Mary M Hemenway, Senior Lecturer  
Department of Astronomy  
PhD, University of Virginia, 1971

Graeme Andrew Henkelman, Associate Professor  
Department of Chemistry and Biochemistry  
PhD, University of Washington - Seattle, 2001

David L Herrin, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of South Florida, 1986

Matthew A Hersh, Specialist  
Division of Statistics and Scientific Computation  
PhD, University of Kentucky, 2007

Charlotte Herzele, Lecturer  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 1997

Linda A Hicke, Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of California-Berkeley, 1990

Gary J Hill, Research Professor (Affiliated)  
Department of Astronomy  
PhD, University of Hawaii at Hilo, 1988

David M Hillis, Professor  
Alfred W. Roark Centennial Professorship in Natural Sciences  
Section of Integrative Biology  
PhD, University of Kansas Main Campus, 1985

Mary C Hines, Lecturer  
School of Biological Sciences  
PhD, University of Louisville, 1989

Deanna M Hoelscher, Adjunct Professor  
Department of Nutritional Sciences

PhD, University of Texas at Austin, 1991

David W Hoffman, Associate Professor  
Department of Chemistry and Biochemistry  
PhD, Duke University, 1986

Gerald W Hoffmann, Professor  
Department of Physics  
PhD, University of California-Los Angeles, 1971

Johann Hofmann, Associate Professor  
Section of Integrative Biology  
PhD, Universitat Leipzig, 1997

James A Holcombe, Professor  
Department of Chemistry and Biochemistry  
PhD, University of Michigan-Ann Arbor, 1974

Bradley J Holliday, Associate Professor  
Department of Chemistry and Biochemistry  
PhD, Northwestern University, 2003

Gloria J Holt, Professor Emeritus  
Department of Marine Science  
Department of Marine Science  
PhD, Texas A & M University, 1976

Claude W Horton, Professor Emeritus  
Department of Physics  
PhD, University of California-San Diego, 1967

David C Huang, Specialist  
Department of Chemistry and Biochemistry  
BSCh, University of Texas at Austin, 2011

Jon M Huibregtse, Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Michigan-Ann Arbor, 1989

Alexander C Huk, Associate Professor  
Section of Neurobiology  
PhD, Stanford University, 2001

Jane M Huk, Specialist  
College of Natural Sciences  
PhD, Stanford University, 2000

Simon M Humphrey, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, University of Cambridge, 2006

Warren A Hunt, Professor  
Department of Computer Science  
PhD, University of Texas at Austin, 1985

Enamul Huq, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Purdue University Main Campus, 1997

Patricia Denise Hurn, Research Professor (Affiliated)  
Section of Neurobiology  
PhD, Johns Hopkins University, 1990

Stephen D Hursting, Professor  
Margaret McKean Love Chair in Nutrition, Cellular and Molecular  
Sciences  
Department of Nutritional Sciences

PhD, University of North Carolina at Chapel Hill, 1992

Aletha C Huston, Professor Emeritus  
Department of Human Development and Family Sciences  
PhD, University of Minnesota-Twin Cities, 1965

Ted L Huston, Professor  
Amy Johnson McLaughlin Centennial Professorship in Home  
Economics  
Department of Human Development and Family Sciences  
PhD, State University of New York at Albany, 1972

Amy Elizabeth Imes, Lecturer  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 2008

Corinne Irwin, Senior Lecturer  
Department of Mathematics  
MA, University of Texas at Austin, 1979

Samuel Baruch Isaacson, Instructor  
Department of Mathematics  
PhD, Harvard University, 2009

Brent L Iverson, Professor  
Warren J. and Viola Mae Raymer Professorship  
Department of Chemistry and Biochemistry  
PhD, California Institute of Technology, 1988

Sujit S Iyer, Lecturer  
Division of Statistics and Scientific Computation  
MD, Baylor College of Medicine, 2002

Vishwanath R Iyer, Associate Professor  
Section of Molecular Genetics and Microbiology  
PhD, Harvard University, 1996

Antone G Jacobson, Professor Emeritus  
Section of Molecular Cell and Developmental Biology  
PhD, Stanford University, 1955

Deborah B Jacobvitz, Professor  
Department of Human Development and Family Sciences  
PhD, University of Minnesota-Twin Cities, 1987

Daniel T Jaffe, Professor  
Department of Astronomy  
PhD, Harvard University, 1981

Mary K Jamsek, Specialist  
Department of Human Development and Family Sciences  
MS, Syracuse University Main Campus, 1990

Robert K Jansen, Professor  
Sidney F. and Doris Blake Centennial Professorship in Systematic  
Botany and the Blake Collection  
Section of Integrative Biology  
PhD, Ohio State U Main Campus, 1982

Sharon K Jasper, Lecturer  
School of Biological Sciences  
PhD, Texas A & M University, 1996

Cynthia K Jay, Lecturer  
Division of Textiles and Apparel  
PhD, University of Texas at Austin, 1999

Makkuni Jayaram, Professor

Section of Molecular Genetics and Microbiology  
PhD, Indian Institute of Science, 1977

William H Jefferys, Professor Emeritus  
Department of Astronomy  
PhD, Yale University, 1965

Shalene Jha, Assistant Professor  
Section of Integrative Biology  
PhD, University of Michigan-Ann Arbor, 2009

Shardha Jogee, Associate Professor  
Department of Astronomy  
PhD, Yale University, 1999

Peter W John, Professor Emeritus  
Department of Mathematics  
PhD, University of Oklahoma Norman Campus, 1955

Arlen W Johnson, Professor  
Section of Molecular Genetics and Microbiology  
PhD, Harvard University, 1988

Kenneth Johnson, Professor  
Roger J. Williams Centennial Professorship in Biochemistry  
Department of Chemistry and Biochemistry  
PhD, University of Wisconsin-Madison, 1975

Travis H Johnson, Specialist  
Department of Chemistry and Biochemistry  
MS, University of Texas at Austin, 2007

Daniel Johnston, Professor  
Karl Folkers Chair in Interdisciplinary Biomedical Research  
Section of Neurobiology  
PhD, Duke University, 1974

Marshall C Johnston, Professor Emeritus  
Section of Integrative Biology  
PhD, University of Texas at Austin, 1955

Patricia D Jolley, Specialist  
Department of Human Development and Family Sciences  
MA, University of Texas at Austin, 1991

Christopher A Jolly, Associate Professor  
Department of Nutritional Sciences  
PhD, Texas A & M University, 1996

Richard A Jones, Professor  
Department of Chemistry and Biochemistry  
PhD, University of London, 1978

David Jordan, Instructor  
Department of Mathematics  
PhD, Massachusetts Institute of Technology, 2011

Thomas E Juenger, Associate Professor  
Section of Integrative Biology  
PhD, University of Chicago, 1999

Jeil Jung, Lecturer  
Department of Physics  
PhD, Universidad Nacional de Educaci?n a Distancia, 2005

William Patrick Kalahurka, Lecturer  
Department of Mathematics

PhD, University of Texas at Austin, 2010

Klaus O Kalthoff, Professor Emeritus  
Section of Molecular Cell and Developmental Biology  
Section of Molecular Cell and Developmental Biology  
PhD, Albert Ludwig University Freiburg im Breisgau, 1971

Vadim Kaplunovsky, Professor  
Department of Physics  
PhD, Tel Aviv University, 1984

Cagri Karakurt, Instructor  
Department of Mathematics  
PhD, Michigan State University, East Lansing, 2010

Adrian T Keatinge-Clay, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, University of California-San Francisco, 2004

Stephen W Keckler, Professor  
Department of Computer Science  
PhD, Massachusetts Institute of Technology, 1998

Sean M Keel, Professor  
Department of Mathematics  
PhD, University of Chicago, 1989

Timothy H Keitt, Associate Professor  
Section of Integrative Biology  
PhD, University of New Mexico Main Campus, 1995

John W Keto, Professor  
Department of Physics  
PhD, University of Wisconsin-Madison, 1972

Mark J Kilgard, Specialist  
Department of Computer Science  
BA, Rice University, 1991

Can Kilic, Assistant Professor  
Department of Physics  
PhD, Harvard University, 2006

Jonghwan Kim, Assistant Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of Texas at Austin, 2005

Su Yeong Kim, Assistant Professor  
Department of Human Development and Family Sciences  
PhD, University of California-Davis, 2003

Lynn E Kirby, Clinical Assistant Professor  
UTeach-Natural Sciences  
MLibArts, St Edward's University, 2007

Mark A Kirkpatrick, Professor  
T. S. Painter Centennial Professorship in Genetics  
Section of Integrative Biology  
PhD, University of Washington - Seattle, 1983

Karrol A Kitt, Associate Professor  
Department of Human Development and Family Sciences  
PhD, Purdue University Main Campus, 1978

George B Kitto, Professor  
Department of Chemistry and Biochemistry  
PhD, Brandeis University, 1966

Leonard Kleinman, Professor Emeritus  
Department of Physics  
PhD, University of California-Berkeley, 1960

Kimberly Kline, Professor  
Julian C. Barton Professorship in Nutrition  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 1985

Adam Richard Klivans, Associate Professor  
Department of Computer Science  
PhD, Massachusetts Institute of Technology, 2002

Diane M Kneeland, Lecturer  
School of Biological Sciences  
PhD, University of Victoria, 1991

Jeffrey T Knight, Specialist  
Department of Chemistry and Biochemistry  
MEd, University of Texas at Austin, 2011

Daniel F Knopf, Associate Professor  
Department of Mathematics  
PhD, University of Wisconsin-Milwaukee, 1999

Hans A Koch, Professor  
Department of Mathematics  
PhD, University of Geneva, 1979

Deanna Nicole Koenig, Specialist  
School of Biological Sciences  
BS, Michigan State University, East Lansing, 2011

Helmut J Koester, Assistant Professor  
Section of Neurobiology  
PhD, Ruprecht-Karls-Universität Heidelberg, 1999

Lars Koesterke, Lecturer  
Division of Statistics and Scientific Computation  
PhD, Christian Albrecht University of Kiel, 1994

Leah Anna Kolar, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Texas at Austin, 2011

Eiichiro Komatsu, Professor  
Department of Astronomy  
Department of Physics  
PhD, Tohoku University, 2001

Sacha E Kopp, Associate Professor  
Department of Physics  
PhD, University of Chicago, 1994

John Kormendy, Professor  
Curtis T. Vaughan, Jr. Centennial Chair in Astronomy  
Department of Astronomy  
PhD, California Institute of Technology, 1976

Mourad Krifa, Assistant Professor  
Division of Textiles and Apparel  
School of Human Ecology  
PhD, Université de Haute Alsace, Mulhouse-Colmar, 2001

Michael J Krische, Professor  
The Robert A. Welch Chair in Science  
Department of Chemistry and Biochemistry

PhD, Stanford University, 1997

Robert M Krug, Professor  
Section of Molecular Genetics and Microbiology  
PhD, Rockefeller University, 1966

Colin J Kubarych, Specialist  
Department of Chemistry and Biochemistry  
MA, University of Texas at Austin, 2010

Catherine Mareva Kublik, Instructor  
Department of Mathematics  
PhD, University of Michigan-Ann Arbor, 2010

Benjamin J Kuipers, Professor Emeritus  
Department of Computer Science  
PhD, Massachusetts Institute of Technology, 1977

Pawan Kumar, Professor  
Department of Astronomy  
PhD, California Institute of Technology, 1988

John W La Claire, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of California-Berkeley, 1979

Cynthia A Labrake, Senior Lecturer  
Department of Chemistry and Biochemistry  
PhD, Loyola University Chicago, 1992

John H Lacy, Professor  
Department of Astronomy  
PhD, University of California-Berkeley, 1979

Travis J Laduc, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2003

Jeanne M Lagowski, Professor Emeritus  
Section of Neurobiology  
PhD, University of Michigan-Ann Arbor, 1957

Joseph J Lagowski, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, Michigan State University, East Lansing, 1957

Simon S Lam, Professor  
Regents Chair in Computer Sciences #1  
Department of Computer Science  
PhD, University of California-Los Angeles, 1974

David L Lambert, Professor  
Isabel McCutcheon Harte Centennial Chair in Astronomy  
Department of Astronomy  
DPhil, University of Oxford, 1965

Alan Lambowitz, Professor  
Mr. and Mrs. A. Frank Smith, Jr. Regents Chair in Molecular Biology,  
Nancy Lee and Perry R. Bass Regents Chair in Molecular Biology  
Section of Molecular Genetics and Microbiology  
Department of Chemistry and Biochemistry  
PhD, Yale University, 1972

Michelle A Lane, Adjunct Associate Professor  
Department of Nutritional Sciences  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 1996



Karol Lang, Professor  
Department of Physics  
PhD, University of Rochester, 1985

Judith H Langlois, Professor  
Charles and Sarah Seay Regents Professorship in Developmental Psychology  
Department of Human Development and Family Sciences  
PhD, Louisiana State University and Agricultural and Mechanical College, 1973

Laura M Lashinger, Lecturer  
Department of Nutritional Sciences  
PhD, University of Texas Health Science Center at Houston, 2005

Anita G Latham, Lecturer  
School of Biological Sciences  
PhD, University of Alabama at Birmingham, 1999

David A Laude, Professor  
Department of Chemistry and Biochemistry  
PhD, University of California-Riverside, 1984

Sam H Le, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Texas at Austin, 2008

Thai Hoang Le, Instructor  
Department of Mathematics  
PhD, University of California-Los Angeles, 2010

Stefanie West Leacock, Lecturer  
School of Biological Sciences  
PhD, Yale University, 2006

Matthew Alan Lease, Assistant Professor  
Department of Computer Science  
PhD, Brown University, 2009

Doris Lefkowitz, Adjunct Professor  
Section of Molecular Genetics and Microbiology  
PhD, Texas Tech University Health Sciences Center, 1986

Stanley Lefkowitz, Adjunct Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Maryland Baltimore, 1961

Mathew A Leibold, Professor  
Harold C. and Mary D. Bold Regents Professorship of Cryptogamic Botany (Phycology)  
Section of Integrative Biology  
PhD, Michigan State University, East Lansing, 1988

Richard Leu, Specialist  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2011

Christophe Leveque, Adjunct Assistant Professor  
Section of Molecular Genetics and Microbiology  
MD, Louisiana State University Health Sciences Center, 1981

Donald A Levin, Professor  
Section of Integrative Biology  
PhD, University of Illinois at Urbana-Champaign, 1964

Marsha J Lewis, Specialist  
College of Natural Sciences

PhD, University of Texas at Austin, 2010

Xiaoqin Li, Assistant Professor  
Department of Physics  
PhD, University of Michigan-Ann Arbor, 2003

Vladimir Lifschitz, Professor  
Professorship in Computer Sciences #2  
Department of Computer Science  
PhD, Steklov Mathematical Institute, 1969

Robert W Ligon, Lecturer  
School of Biological Sciences  
MA, University of Missouri - Kansas City, 1987

Sang-Hyun Lim, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, University of Illinois at Urbana-Champaign, 2003

Calvin Lin, Professor  
Department of Computer Science  
PhD, University of Washington - Seattle, 1992

Cristal L Lindell, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Texas at San Antonio, 2008

Craig R Linder, Associate Professor  
Section of Integrative Biology  
PhD, Brown University, 1984

Hung-Wen Liu, Professor  
George H. Hitchings Regents Chair in Drug Design  
Department of Chemistry and Biochemistry  
PhD, Columbia University in the City of New York, 1981

Zhanfei Liu, Assistant Professor  
Department of Marine Science  
PhD, State University of New York at Stony Brook, 2006

Alan M Lloyd, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Stanford University, 1993

John C Loehlin, Professor Emeritus  
Department of Computer Science  
PhD, University of California-Berkeley, 1957

Roseann Loop, Professor  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 1968

Timothy J Loving, Associate Professor  
Department of Human Development and Family Sciences  
PhD, Purdue University Main Campus, 2001

Jeffrey James Luci, Research Assistant Professor (Affiliated)  
Section of Neurobiology  
PhD, University of Iowa, 2002

John E Luecke, Professor  
Department of Mathematics  
PhD, University of Texas at Austin, 1985

Donna C Lyon, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 2002

Martha M Maas, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2005

Tom J Mabry, Professor Emeritus  
Section of Molecular Cell and Developmental Biology  
PhD, Rice University, 1960

Allan H Macdonald, Professor  
Sid W. Richardson Foundation Regents Chair in Physics #1  
Department of Physics  
PhD, University of Toronto, 1978

Paul M Macdonald, Professor  
Mr. and Mrs. Robert P. Doherty, Jr. Regents Chair in Molecular Biology  
Section of Molecular Cell and Developmental Biology  
PhD, Vanderbilt University, 1983

Jan M Machart, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2001

Albert James MacKrell, Specialist  
College of Natural Sciences  
PhD, University of California-Los Angeles, 1992

Philip D Magnus, Professor  
R. P. Doherty, Jr. - Welch Regents Chair in Chemistry  
Department of Chemistry and Biochemistry  
PhD, University of London, 1968

Bassett Maguire, Professor Emeritus  
Section of Integrative Biology  
Department of Marine Science  
PhD, Cornell University, 1957

Swadesh M Mahajan, Research Professor (Affiliated)  
Department of Physics  
PhD, University of Maryland College Park, 1973

Lara K Mahal, Adjunct Professor  
Department of Chemistry and Biochemistry  
PhD, University of California-Berkeley, 2000

Michael J Mahometa, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2006

Dmitrii E Makarov, Associate Professor  
Department of Chemistry and Biochemistry  
PhD, Inst. Of Chem. Physics, Moscow, 1992

Jerry M Manheimer, Lecturer  
Department of Human Development and Family Sciences  
PhD, University of New Mexico Main Campus, 1983

Edward M Marcotte, Professor  
Mr. and Mrs. Corbin J. Robertson, Sr. Regents Chair in Molecular Biology  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1995

Michael P Marder, Professor  
Department of Physics  
PhD, University of California-Santa Barbara, 1986

Christina Markert, Assistant Professor  
Department of Physics  
PhD, Johann Wolfgang Goethe University, 2001

John T Markert, Professor  
Department of Physics  
PhD, Cornell University, 1987

Carl N Marti, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2001

Norman M Martin, Professor Emeritus  
Department of Computer Science  
PhD, University of California-Los Angeles, 1952

Stephen F Martin, Professor  
M. June and J. Virgil Waggoner Regents Chair in Chemistry  
Department of Chemistry and Biochemistry  
PhD, Princeton University, 1972

Seena Mathew, Lecturer  
School of Biological Sciences  
PhD, University of Alabama at Birmingham, 2007

Mikhail V Matz, Assistant Professor  
Section of Integrative Biology  
PhD, Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, 1999

Richard A Matzner, Professor  
Department of Physics  
PhD, University of Maryland College Park, 1967

Michael Mauk, Professor  
Section of Neurobiology  
PhD, Stanford University, 1985

James D Mauseth, Professor  
Section of Integrative Biology  
PhD, University of Washington - Seattle, 1975

Mark M Maxwell, Clinical Professor  
Department of Mathematics  
PhD, Oregon State University, 1994

Mary L McAnelly, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1984

Blinda E McClelland, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1994

James W McClelland, Assistant Professor  
Department of Marine Science  
PhD, Boston University, 1998

Stephen P McCord, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1992

William D McCormick, Professor Emeritus  
Department of Physics  
PhD, Duke University, 1959

John T McDevitt, Adjunct Professor  
Department of Chemistry and Biochemistry  
PhD, Stanford University, 1987

Gene D McDonald, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1990

Kathryn S McKinley, Professor  
Professorship in Computer Sciences #5  
Department of Computer Science  
PhD, Rice University, 1992

Cynthia K McMurry, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1996

Monica R Meadows, Lecturer  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 2003

Mona Mehdy, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of California-San Diego, 1984

John C Meth, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 2010

Richard J Meyer, Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Pennsylvania, 1972

Lauren A Meyers, Professor  
Section of Integrative Biology  
PhD, Stanford University, 2000

Greg A Mihailoff, Adjunct Professor  
School of Biological Sciences  
PhD, Ohio State U Main Campus, 1974

S J Mihic, Associate Professor  
Section of Neurobiology  
PhD, University of Toronto, 1992

Risto P Miikkulainen, Professor  
Department of Computer Science  
PhD, University of California-Los Angeles, 1990

Brett Allan Milburn, Lecturer  
Department of Mathematics  
PhD, University of Massachusetts, 2008

Kent F Milfeld, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 1983

Jesse E Miller, Lecturer  
Department of Mathematics  
PhD, University of Illinois at Urbana-Champaign, 2011

Kyle M Miller, Assistant Professor  
Section of Molecular Genetics and Microbiology  
PhD, University College London, 2004

Mary Evelyn Miller, Specialist  
Department of Chemistry and Biochemistry  
BS, Texas State University-San Marcos, 1989

Milos Milosavljevic, Associate Professor  
Department of Astronomy  
PhD, Rutgers the State University of New Jersey New Brunswick Campus, 2002

Dong-Ha Min, Assistant Professor  
Department of Marine Science  
PhD, University of California-San Diego, 1999

Zachary L Miner, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 2011

Daniel P Miranker, Professor  
Department of Computer Science  
PhD, Columbia University in the City of New York, 1987

Jayadev Misra, Professor  
Schlumberger Centennial Chair in Computer Sciences  
Department of Computer Science  
PhD, Johns Hopkins University, 1973

Callie D Mitchell, Specialist  
Department of Chemistry and Biochemistry  
BSCh, University of Texas at Austin, 2011

Shyamal K Mitra, Lecturer  
Department of Computer Science  
PhD, University of Texas at Austin, 1988

Amir Mohammadi, Assistant Professor  
Department of Mathematics  
PhD, Yale University, 2009

Sanghamitra Mohanty, Lecturer  
School of Biological Sciences  
MD, Utkal University, 1982

Aloysius K Mok, Professor  
Quincy Lee Centennial Professorship in Computer Science  
Department of Computer Science  
PhD, Massachusetts Institute of Technology, 1983

Ian J Molineux, Professor  
Section of Molecular Genetics and Microbiology  
DPhil, University of Oxford, 1969

Michael H Montgomery, Specialist  
Department of Astronomy  
Department of Astronomy  
PhD, University of Texas at Austin, 1998

Stephen A Monti, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, Massachusetts Institute of Technology, 1964

Jennifer Moon, Lecturer  
School of Biological Sciences  
PhD, Indiana University at Bloomington, 2004

Raymond J Mooney, Professor  
Professorship in Computer Sciences #3  
Department of Computer Science  
PhD, University of Illinois at Urbana-Champaign, 1987

Barbara E Moore, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1988

C F Moore, Professor Emeritus

Department of Physics  
PhD, Florida State University, 1964

J S Moore, Professor  
Admiral B. R. Inman Centennial Chair in Computing Theory  
Department of Computer Science  
Department of Mathematics  
PhD, University of Edinburgh, 1973

Jennifer Rebecca Morgan, Assistant Professor  
Section of Molecular Cell and Developmental Biology  
Section of Neurobiology  
PhD, Duke University, 2001

Hitoshi Morikawa, Associate Professor  
Section of Neurobiology  
Waggoner Center for Alcohol and Addiction Research  
PhD, Kyoto University, 1999

Philip J Morrison, Professor  
Department of Physics  
PhD, University of California-San Diego, 1979

Peter Mueller, Professor  
Department of Mathematics  
PhD, Purdue University Main Campus, 1991

Ulrich G Mueller, Professor  
William Morton Wheeler-Lost Pines Professorship  
Section of Integrative Biology  
PhD, Cornell University, 1993

Charles B Mullins, Professor  
Z. D. Bonner Professorship of Chemical Engineering  
Department of Chemistry and Biochemistry  
PhD, California Institute of Technology, 1990

Pablo Munguia, Assistant Professor  
Department of Marine Science  
PhD, Florida State University, 2006

Petr Munk, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, In of Macromole Chem, 1961

Margaret E Myers, Lecturer  
Division of Statistics and Scientific Computation  
Department of Computer Science  
PhD, University of Maryland College Park, 1988

Hossein Namazi, Assistant Professor  
Department of Mathematics  
PhD, State University of New York at Stony Brook, 2005

R E Nather, Professor Emeritus  
Department of Astronomy  
PhD, University of Cape Town, 1972

Richard F Nauert, Adjunct Associate Professor  
School of Biological Sciences  
PhD, University of Texas at Austin, 2002

Paul A Navratil, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2010

Lisa Ann Neff, Assistant Professor

Department of Human Development and Family Sciences  
PhD, University of Florida, 2002

Andrew M Neitzke, Assistant Professor  
Department of Mathematics  
PhD, Harvard University, 2005

Raymond L Neubauer, Senior Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1993

David Minh Nguyen, Specialist  
Department of Chemistry and Biochemistry  
BSCh, University of Texas at Austin, 2011

Carol A Nicols, Senior Lecturer  
Division of Textiles and Apparel  
MA, Central Saint Martins College of Art and Design, 1981

Karen Ann Niederreither, Research Associate Professor (Affiliated)  
Department of Nutritional Sciences  
PhD, University of Texas Health Science Center at Houston, 1993

Hiroshi Nishiyama, Assistant Professor  
Section of Neurobiology  
PhD, Kyoto University, 2002

Qian Niu, Professor  
Trull Centennial Professorship in Physics #1  
Department of Physics  
PhD, University of Washington - Seattle, 1985

A W Nolle, Professor Emeritus  
Department of Physics  
PhD, Massachusetts Institute of Technology, 1947

Alison N Norman, Lecturer  
Department of Computer Science  
PhD, University of Texas at Austin, 2010

Gordon S Novak, Professor  
Department of Computer Science  
PhD, University of Texas at Austin, 1976

Nomeli P Nunez, Assistant Professor  
Department of Nutritional Sciences  
PhD, Washington State University, 1999

Theresa J O'Halloran, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of North Carolina at Chapel Hill, 1986

Melvin E Oakes, Professor Emeritus  
Department of Physics  
PhD, Florida State University, 1964

Edward W Odell, Professor  
John T. Stuart III Centennial Professorship in Mathematics  
Department of Mathematics  
PhD, Massachusetts Institute of Technology, 1975

J T Oden, Professor  
Cockrell Family Regents Chair in Engineering #2, Peter O'Donnell, Jr.  
Centennial Chair in Computing Systems  
Department of Mathematics  
Department of Computer Science  
PhD, Oklahoma State University Main Campus, 1962



Raymond Lee Orbach, Professor  
Cockrell Family Chair in Engineering No. 12  
Department of Physics  
PhD, University of California-Berkeley, 1960

Christopher B Orf, Specialist  
Department of Chemistry and Biochemistry  
MS, Oregon State University, 1993

Roger C Osborn, Professor Emeritus  
Department of Mathematics  
PhD, University of Texas at Austin, 1954

Glen Otto, Clinical Professor  
Section of Molecular Genetics and Microbiology  
DVM, University of Minnesota-Twin Cities, 1987

Ekin Ozman, Instructor  
Department of Mathematics  
PhD, University of Wisconsin-Madison, 2007

Sonia Paban, Associate Professor  
Department of Physics  
PhD, University of Barcelona, 1988

Susan J Pacinda, Adjunct Assistant Professor  
Section of Molecular Genetics and Microbiology  
MD, University of Texas Health Science Center at Houston, 1992

Bruce P Palka, Professor Emeritus  
Department of Mathematics  
PhD, University of Michigan-Ann Arbor, 1972

Jose L Panero, Associate Professor  
Section of Integrative Biology  
PhD, University of Tennessee, 1990

Jelena H Pantel, Specialist  
School of Biological Sciences  
PhD, University of Texas at Austin, 2009

Diane Papillion, Lecturer  
Department of Nutritional Sciences  
MPH, University of North Carolina at Chapel Hill, 2001

Mary R Parker, Senior Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 1988

Camille Parmesan, Professor  
Section of Integrative Biology  
PhD, University of Texas at Austin, 1995

James T Pascaleff, Instructor  
Department of Mathematics  
PhD, Massachusetts Institute of Technology, 2011

Yale N Patt, Professor  
Ernest Cockrell, Jr. Centennial Chair in Engineering  
Department of Computer Science  
PhD, Stanford University, 1966

Kristin D Patterson, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1998

Tanya T Paull, Professor  
Mr. and Mrs. Isaac Arnold, Sr. Regents Chair in Molecular Biology

Section of Molecular Genetics and Microbiology  
PhD, University of California-Los Angeles, 1996

Natasa Pavlovic, Associate Professor  
Department of Mathematics  
PhD, University of Illinois at Chicago, 2002

Shelley M Payne, Professor  
Section of Molecular Genetics and Microbiology  
PhD, Tex Hlth Sci C Dallas, U, 1977

Timothy Perutz, Assistant Professor  
Department of Mathematics  
PhD, University of London, 2005

Steven M Phelps, Associate Professor  
Section of Integrative Biology  
PhD, University of Texas at Austin, 1999

Eric R Pianka, Professor  
Denton A. Cooley Centennial Professorship in Zoology  
Section of Integrative Biology  
PhD, University of Washington - Seattle, 1990

Jonathan T Pierce-Shimomura, Assistant Professor  
Section of Neurobiology  
Waggoner Center for Alcohol and Addiction Research  
PhD, University of Oregon, 2000

Jonathan William Pillow, Assistant Professor  
Section of Neurobiology  
PhD, New York University, 2005

Keshav K Pingali, Professor  
W. A. "Tex" Moncrief, Jr. Chair in Distributed and Grid Computing  
Department of Computer Science  
ScD, Massachusetts Institute of Technology, 1986

C Greg Plaxton, Professor  
Department of Computer Science  
PhD, Stanford University, 1989

Martin Poenie, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Stanford University, 1986

Russell A Poldrack, Professor  
Section of Neurobiology  
PhD, University of Illinois at Urbana-Champaign, 1995

George D Pollak, Professor  
Section of Neurobiology  
PhD, University of Maryland College Park, 1970

Mark Todd Pope, Lecturer  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 2011

Bruce W Porter, Professor  
Department of Computer Science  
PhD, University of California-Irvine, 1984

Wilbur A Porter, Research Professor (Affiliated)  
Department of Marine Science  
PhD, Texas A & M University, 1970

Mary F Poteet, Lecturer  
College of Natural Sciences

PhD, University of California-Berkeley, 2001

Pamela G Powell, Clinical Assistant Professor  
UTeach-Natural Sciences  
MEd, University of Texas at Austin, 1993

William H Press, Professor  
Warren J. and Viola Mae Raymer Chair  
Department of Computer Science  
Section of Integrative Biology  
PhD, California Institute of Technology, 1972

Alison Renee Preston, Assistant Professor  
Section of Neurobiology  
PhD, Stanford University, 2004

Nancy B Prideaux, Lecturer  
Division of Textiles and Apparel  
MS, Houston Baptist University, 1985

Nicholas J Priebe, Assistant Professor  
Section of Neurobiology  
PhD, University of California-San Francisco, 2001

Kristen J Procko, Specialist  
College of Natural Sciences  
PhD, University of Texas at Austin, 2009

Lili Qiu, Associate Professor  
Department of Computer Science  
PhD, Cornell University, 2001

Richard B Quay, Lecturer  
Department of Chemistry and Biochemistry  
PhD, Rice University, 1979

Kimberly Raab-Graham, Assistant Professor  
Section of Neurobiology  
PhD, University of California-Santa Barbara, 1998

Jonathan David Radcliffe, Specialist  
Department of Chemistry and Biochemistry  
BS, University of Wisconsin-Eau Claire, 2009

Charles L Radin, Professor  
Department of Mathematics  
PhD, University of Rochester, 1971

Diane S Radin, Senior Lecturer  
Department of Mathematics  
MA, University of Rochester, 1968

Mark G Raizen, Professor  
Sid W. Richardson Foundation Regents Chair in Physics #2  
Department of Physics  
PhD, University of Texas at Austin, 1989

Vijaya Ramachandran, Professor  
William B. Blakemore II Regents Professorship in Computer Sciences  
Department of Computer Science  
PhD, Princeton University, 1983

Alexander P Rand, Lecturer  
Department of Mathematics  
PhD, Carnegie Mellon University, 2009

Michael W Raney, Lecturer  
College of Natural Sciences

PhD, University of Texas at Austin, 1991

Mary A Rankin, Professor  
Section of Integrative Biology  
PhD, University of Iowa, 1972

Joanne M Ravel, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1954

Pradeep Ravikumar, Assistant Professor  
Department of Computer Science  
Division of Statistics and Scientific Computation  
PhD, Carnegie Mellon University, 2007

Julia A Reed, Associate Professor  
Division of Textiles and Apparel  
PhD, Purdue University Main Campus, 1973

Lester J Reed, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, University of Illinois at Urbana-Champaign, 1946

Linda E Reichl, Professor  
Department of Physics  
PhD, University of Denver, 1969

Stuart A Reichler, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1999

Alan W Reid, Professor  
Pennzoil Company Regents Professorship in Mathematics  
Department of Mathematics  
PhD, University of Aberdeen, 1988

Kui Ren, Assistant Professor  
Department of Mathematics  
PhD, Columbia University in the City of New York, 2006

David Bruce Ress, Research Associate Professor (Affiliated)  
Section of Neurobiology  
PhD, Stanford University, 1988

Benjamin T Rhodes, Lecturer  
Department of Mathematics  
PhD, Oklahoma State University Main Campus, 1961

Elaine A Rich, Senior Lecturer  
Department of Computer Science  
PhD, Carnegie Mellon University, 1979

Phyllis L Richards, Professor Emeritus  
Department of Human Development and Family Sciences  
PhD, Florida State University, 1964

Richard H Richardson, Professor Emeritus  
Section of Integrative Biology  
PhD, North Carolina State University, 1965

Austen F Riggs, Professor Emeritus  
Section of Neurobiology  
PhD, Harvard University, 1951

Peter J Riley, Professor  
Department of Physics  
PhD, University of Alberta, 1962

Jack L Ritchie, Professor  
Department of Physics  
PhD, University of Rochester, 1984

Ritu Ritu, Lecturer  
Division of Statistics and Scientific Computation  
PhD, , 2010

Michael T Roberts, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2005

Jon D Robertus, Professor  
Benjamin Clayton Centennial Professorship in Biochemistry  
Department of Chemistry and Biochemistry  
PhD, University of California-San Diego, 1972

Edward L Robinson, Professor  
William B. Blakemore II Regents Professorship in Astronomy  
Department of Astronomy  
PhD, University of Texas at Austin, 1973

Bruce E Rodenborn, Lecturer  
Department of Physics  
PhD, University of Texas at Austin, 2011

Stacia E Rodenbusch, Specialist  
College of Natural Sciences  
PhD, University of California-Berkeley, 2009

Altha B Rodin, Senior Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 1988

Shelly R Rodriguez, Clinical Assistant Professor  
UTeach-Natural Sciences  
MA, University of Texas at Austin, 2003

F Rodriguez-Villegas, Professor  
Department of Mathematics  
PhD, The Ohio State University Main Campus, 1990

Michael Rose, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, University of California-Santa Cruz, 2009

Haskell P Rosenthal, Professor Emeritus  
Department of Mathematics  
PhD, Stanford University, 1965

Peter J Rossky, Professor  
Marvin K. Collie-Welch Regents Chair in Chemistry  
Department of Chemistry and Biochemistry  
PhD, Harvard University, 1978

Stanley J Roux, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Yale University, 1971

Bradley A Rowland, Specialist  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 2007

David Rusin, Lecturer  
Department of Mathematics  
PhD, University of Chicago, 1984

Rick Russell, Associate Professor

Department of Chemistry and Biochemistry  
PhD, Johns Hopkins University, 1998

Michael J Ryan, Professor  
Clark Hubbs Regents Professorship in Zoology  
Section of Integrative Biology  
PhD, Cornell University, 1982

Lorenzo A Sadun, Professor  
Department of Mathematics  
PhD, University of California-Berkeley, 1987

David J Saltman, Professor Emeritus  
Department of Mathematics  
PhD, Yale University, 1976

Bob G Sanders, Professor  
Section of Molecular Genetics and Microbiology  
Department of Nutritional Sciences  
PhD, Penn State University Park, 1961

Sahotra Sarkar, Professor  
Section of Integrative Biology  
PhD, University of Chicago, 1989

K Sathasivan, Senior Lecturer  
School of Biological Sciences  
PhD, Louisiana State University and Agricultural and Mechanical College, 1991

Kanthimathi Sathasivan, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 2011

Sara Lea Sawyer, Assistant Professor  
Section of Molecular Genetics and Microbiology  
PhD, Cornell University, 2003

Inder M Saxena, Lecturer  
School of Biological Sciences  
PhD, Jawaharlal Nehru University, 1984

Pratibha Saxena, Lecturer  
School of Biological Sciences  
PhD, Jawaharlal Nehru University, 1983

John M Scalo, Professor  
Josey Centennial Professorship in Astronomy  
Department of Astronomy  
PhD, University of California-Los Angeles, 1973

William C Schieve, Professor Emeritus  
Department of Physics  
PhD, Lehigh University, 1959

Evelyn M Schultz, Lecturer  
Department of Mathematics  
MA, Duke University, 1972

Arlo W Schurle, Lecturer  
Department of Mathematics  
PhD, University of Kansas Main Campus, 1967

Matthew Russell Schwausch, Specialist  
School of Biological Sciences  
BSBio, University of Texas at Austin, 2007

Roy F Schwitters, Professor

Sid W. Richardson Foundation Regents Chair in Physics #4  
Department of Physics  
PhD, Massachusetts Institute of Technology, 1971

Michael D Scott, Senior Lecturer  
Department of Computer Science  
MS, Rensselaer Polytechnic Institute, 1998

Jon N Seal, Lecturer  
School of Biological Sciences  
PhD, Florida State University, 2006

Donn M Searle, Lecturer  
College of Natural Sciences  
MA, University of Virginia, 1990

Leonard L Seelig, Lecturer  
School of Biological Sciences  
PhD, University of Texas Health Science Center at San Antonio, 1975

Sue E Seely, Lecturer  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 2006

Eyal Seidemann, Associate Professor  
Section of Neurobiology  
PhD, Stanford University, 1998

Jonathan L Sessler, Professor  
Rowland Pettit Centennial Chair in Chemistry  
Department of Chemistry and Biochemistry  
PhD, Stanford University, 1982

Gerald Christopher Shank, Assistant Professor  
Department of Marine Science  
PhD, University of North Carolina at Chapel Hill, 2003

S M Shankland, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of California-Berkeley, 1982

Paul R Shapiro, Professor  
Frank N. Edmonds, Jr. Regents Professorship in Astronomy  
Department of Astronomy  
PhD, Harvard University, 1978

Jason B Shear, Professor  
Department of Chemistry and Biochemistry  
PhD, Stanford University, 1994

Ruth I Shear, Senior Lecturer  
College of Natural Sciences  
PhD, Griffith University, 1991

Gregory A Shields, Professor  
Jane and Roland Blumberg Centennial Professorship in Astronomy  
Department of Astronomy  
PhD, California Institute of Technology, 1973

Chih-Kang Shih, Professor  
Jane and Roland Blumberg Professorship in Physics  
Department of Physics  
PhD, Stanford University, 1988

Frank T Shirley, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 1984

Vitaly Shmatikov, Associate Professor  
Department of Computer Science  
PhD, Stanford University, 2000

Ben A Shoulders, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1964

Ralph E Showalter, Professor Emeritus  
Department of Mathematics  
PhD, University of Illinois at Urbana-Champaign, 1968

George T Shubeita, Assistant Professor  
Department of Physics  
PhD, Universite de Lausanne, 2002

Gennady Shvets, Professor  
Department of Physics  
PhD, Massachusetts Institute of Technology, 1995

Dionicio Rhodes Siegel, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, Harvard University, 2003

Karen K Silcox, Lecturer  
Department of Human Development and Family Sciences  
PhD, University of Texas at Austin, 2011

Dee U Silverthorn, Senior Lecturer  
School of Biological Sciences  
PhD, University of South Carolina - Columbia, 1973

Sarah L Simmons, Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 2002

Beryl B Simpson, Professor  
C. L. Lundell Chair of Systematic Botany  
Section of Integrative Biology  
School of Biological Sciences  
PhD, Harvard University, 1968

Michael C Singer, Professor  
Section of Integrative Biology  
PhD, University of Oxford, 1971

Mihai Sirbu, Assistant Professor  
Department of Mathematics  
PhD, Carnegie Mellon University, 2004

Greg O Sitz, Professor  
Department of Physics  
PhD, Stanford University, 1987

Jennifer L Smith, Lecturer  
College of Natural Sciences  
MEd, University of Texas at Austin, 2009

Kimberly Ann Smith, Lecturer  
School of Biological Sciences  
PhD, University of Texas Health Science Center at Houston, 2010

Christopher A Sneden, Professor  
Rex G. Baker, Jr. and McDonald Observatory Centennial Research  
Professorship in Astronomy  
Department of Astronomy  
PhD, University of Texas at Austin, 1974



D Max Snodderly, Professor  
Section of Neurobiology  
Department of Nutritional Sciences  
PhD, Rockefeller University, 1969

Adriana Sofer, Lecturer  
Department of Mathematics  
PhD, The Ohio State University Main Campus, 1993

William Howard Sofer, Adjunct Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Miami, 1967

Stephanie J Somersille, Instructor  
Department of Mathematics  
PhD, University of California-Berkeley, 2009

Katherine Y Southworth, Senior Lecturer  
Department of Nutritional Sciences  
MS, University of Kentucky, 1968

Stacy C Sparks, Senior Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1999

Hallie G Speranza, Lecturer  
Department of Human Development and Family Sciences  
MA, University of Texas at Austin, 1991

Ravi Srinivasan, Instructor  
Department of Mathematics  
PhD, Brown University, 2009

Catherine A Stacy, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2001

John F Stanton, Professor  
George W. Watt Centennial Professorship  
Department of Chemistry and Biochemistry  
PhD, Harvard University, 1989

Michael P Starbird, Professor  
Department of Mathematics  
PhD, University of Wisconsin-Madison, 1974

Eric J Staron, Lecturer  
Department of Mathematics  
PhD, University of Texas at Austin, 2012

Deanna M Staskel, Lecturer  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 2006

David S Stein, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, Stanford University, 1989

Lydia C Steinman, Senior Lecturer  
Department of Nutritional Sciences  
MA, University of Texas at Austin, 1987

Elizabeth F Stepp, Lecturer  
Department of Mathematics  
PhD, University of Kentucky, 2005

Leslie Stevens, Research Assistant Professor (Affiliated)  
Section of Molecular Cell and Developmental Biology

PhD, Harvard University, 1987

Scott W Stevens, Associate Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of North Carolina at Chapel Hill, 1996

Keith J Stevenson, Professor  
Department of Chemistry and Biochemistry  
PhD, University of Utah, 1997

Peter H Stone, Associate Professor  
Department of Computer Science  
PhD, Carnegie Mellon University, 1998

Gwendolyn M Stovall, Specialist  
College of Natural Sciences  
PhD, University of Texas at Austin, 2011

George Sudarshan, Professor  
Department of Physics  
PhD, University of Rochester, 1958

Christopher S Sullivan, Assistant Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Pittsburgh, Pittsburgh Campus, 2000

Hsiang-Yuan Sung, Specialist  
Department of Chemistry and Biochemistry  
MA, University of Texas at Austin, 2011

Sibum Sung, Assistant Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of Wisconsin-Madison, 2004

Catherine A Surra, Professor Emeritus  
Department of Human Development and Family Sciences  
PhD, Pennsylvania State University Main Campus, 1980

Sara J Sutcliffe, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 2000

Harry E Sutton, Professor Emeritus  
Section of Molecular Genetics and Microbiology  
PhD, University of Texas at Austin, 1953

Michael Scott Sweet, Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 2008

Sara Johnson Sweitzer, Lecturer  
Department of Nutritional Sciences  
PhD, University of Texas at Austin, 2009

Jack B Swift, Professor Emeritus  
Department of Physics  
PhD, University of Illinois at Urbana-Champaign, 1968

Harry L Swinney, Professor  
Sid W. Richardson Foundation Regents Chair in Physics #3  
Department of Physics  
PhD, Johns Hopkins University, 1968

Paul J Szaniszlo, Professor Emeritus  
Section of Molecular Genetics and Microbiology  
PhD, University of North Carolina at Chapel Hill, 1967

Steve Takata, Lecturer

School of Biological Sciences  
PhD, University of California-Berkeley, 2002

Jeffrey J Tarrand, Adjunct Assistant Professor  
Section of Molecular Genetics and Microbiology  
MD, University of Virginia, 1981

John T Tate, Professor Emeritus  
Department of Mathematics  
PhD, Princeton University, 1950

Richard A Taylor, Lecturer  
School of Biological Sciences  
PhD, University of South Florida, 2003

Samuel H Taylor, Specialist  
College of Natural Sciences  
PhD, University of York, 2006

Edward C Theriot, Professor  
Jane and Roland Blumberg Centennial Professorship in Molecular  
Evolution  
Section of Integrative Biology  
PhD, University of Michigan-Ann Arbor, 1983

Peter Thomas, Professor  
H-E-B Endowed Chair in Marine Science  
Department of Marine Science  
Section of Integrative Biology  
PhD, University of Leicester, 1978

Guy Thompson, Professor Emeritus  
Section of Molecular Cell and Developmental Biology  
PhD, California Institute of Technology, 1959

James C Thompson, Professor Emeritus  
Department of Physics  
PhD, Rice University, 1956

Wesley J Thompson, Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of California-Berkeley, 1975

Anne M Tibbetts, Specialist  
College of Natural Sciences  
PhD, University of Texas at Austin, 1999

Jane F Tillman, Lecturer  
Department of Nutritional Sciences  
MS, Texas Woman's University, 1977

Philip U Treisman, Professor  
Department of Mathematics  
PhD, University of California-Berkeley, 1985

Michael Stephen Trent, Associate Professor  
Section of Molecular Genetics and Microbiology  
PhD, East Tennessee State University, 1998

Yen-Hsi Tsai, Associate Professor  
Department of Mathematics  
PhD, University of California-Los Angeles, 2002

Maxim Tsoi, Associate Professor  
Department of Physics  
PhD, Universitat Konstanz, 1998

Philip W Tucker, Professor

Marie Betzner Morrow Centennial Chair  
Section of Molecular Genetics and Microbiology  
PhD, Texas A & M University, 1975

Billie L Turner, Professor Emeritus  
Section of Integrative Biology  
PhD, Washington State University, 1953

Jack S Turner, Associate Professor  
Department of Physics  
PhD, Indiana University at Bloomington, 1969

Takeshi Udagawa, Professor Emeritus  
Department of Physics  
PhD, Univ of Tsukuba, 1962

Karen Uhlenbeck, Professor  
Sid W. Richardson Foundation Regents Chair in Mathematics #3  
Department of Mathematics  
PhD, Brandeis University, 1968

Emin T Ulug, Senior Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1984

Ko Um, Lecturer  
Department of Mathematics  
PhD, University of Iowa, 2010

Jason Upton, Assistant Professor  
Section of Molecular Genetics and Microbiology  
PhD, Washington University in St Louis, 2006

Jeffrey D Vaaler, Professor  
Department of Mathematics  
PhD, University of Illinois at Urbana-Champaign, 1974

Leslie J Vaaler, Senior Lecturer  
Department of Mathematics  
PhD, Princeton University, 1982

Robert A Van De Geijn, Professor  
Department of Computer Science  
PhD, University of Maryland University College, 1987

David A Vandebout, Associate Professor  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1995

Alexis F Vasseur, Professor  
Department of Mathematics  
PhD, Université de Paris VI, Pierre et Marie Curie, 1999

James W Vick, Professor  
Department of Mathematics  
PhD, University of Virginia, 1968

Itamar Villanueva, Specialist  
School of Biological Sciences  
PhD, Texas A & M University, 2010

Tracy A Villareal, Professor  
Department of Marine Science  
PhD, University of Rhode Island, 1989

Mikhail M Vishik, Professor  
Department of Mathematics

PhD, University of Moscow, 1980

Bindu Viswanathan, Lecturer  
Division of Statistics and Scientific Computation  
PhD, Emory University, 1999

Steven A Vokes, Assistant Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of Texas at Austin, 2002

Jose F Voloch, Professor  
Department of Mathematics  
PhD, University of Cambridge, 1985

Francois Waelbroeck, Research Professor (Affiliated)  
Department of Physics  
PhD, University of Texas at Austin, 1988

Michael H Walfish, Assistant Professor  
Department of Computer Science  
SM, Massachusetts Institute of Technology, 2004

Deborah R Walker, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 2005

James R Walker, Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Texas at Austin, 1963

Mary H Walker, Clinical Associate Professor  
UTeach-Natural Sciences  
PhD, University of Texas at Austin, 1979

John B Wallingford, Associate Professor  
Section of Molecular Cell and Developmental Biology  
PhD, University of Texas at Austin, 1998

Dale E Walston, Associate Professor Emeritus  
Department of Mathematics  
PhD, University of Texas at Austin, 1961

Benjamin Walther, Assistant Professor  
Department of Marine Science  
PhD, Woods Hole Oceanographic Institution, 2007

Jessica E Wandelt, Lecturer  
School of Biological Sciences  
PhD, University of Arizona, 2005

Rachel A Ward, Assistant Professor  
Department of Mathematics  
Department of Mathematics  
PhD, Princeton University, 2009

Tandy Warnow, Professor  
David Bruton, Jr. Centennial Professorship in Computer Sciences #3  
Department of Computer Science  
PhD, University of California-Berkeley, 1991

Brent R Waters, Assistant Professor  
Department of Computer Science  
PhD, Princeton University, 2004

Pamela J Way, Lecturer  
College of Natural Sciences  
PhD, University of Texas at Austin, 2002

Lauren J Webb, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, California Institute of Technology, 2005

Stephen E Webber, Professor Emeritus  
Department of Chemistry and Biochemistry  
PhD, University of Chicago, 1965

Steven Weinberg, Professor  
Jack S. Josey - Welch Foundation Chair in Science  
Department of Physics  
Department of Astronomy  
PhD, Princeton University, 1957

John C Wheeler, Professor  
Samuel T. and Fern Yanagisawa Regents Professorship in Astronomy  
Department of Astronomy  
PhD, University of Colorado at Boulder, 1969

Mary F Wheeler, Professor  
Ernest and Virginia Cockrell Chair in Engineering  
Department of Mathematics  
PhD, Rice University, 1971

Andrew B Whinston, Professor  
Hugh Roy Cullen Centennial Chair in Business Administration  
Department of Computer Science  
PhD, Carnegie Mellon University, 1962

Travis White, Specialist  
College of Natural Sciences  
PhD, University of Texas at Austin, 2011

Marvin Whiteley, Associate Professor  
Section of Molecular Genetics and Microbiology  
PhD, University of Iowa, 2001

Jacob T Whitt, Specialist  
School of Biological Sciences  
PhD, University of Texas at Austin, 2011

Claus O Wilke, Associate Professor  
Section of Integrative Biology  
PhD, Ruhr-Universitat Bochum, 1999

Katherine A Willets, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, Stanford University, 2005

Robert F Williams, Professor Emeritus  
Department of Mathematics  
PhD, University of Virginia (Old Code), 1954

Richard A Willis, Professor Emeritus  
Department of Nutritional Sciences  
PhD, University of Oklahoma Health Sciences Center, 1979

Frank Willmore, Lecturer  
Division of Statistics and Scientific Computation  
PhD, , 2006

Derek Wills, Professor  
Department of Astronomy  
PhD, University of Cambridge, 1966

Carlton G Willson, Professor  
Rashid Engineering Regents Chair

Department of Chemistry and Biochemistry  
PhD, University of California-Berkeley, 1974

Robb J Wilson, Lecturer  
Department of Chemistry and Biochemistry  
PhD, University of Michigan-Ann Arbor, 1998

Donald E Winget, Professor  
Harlan J. Smith Centennial Professorship in Astronomy  
Department of Astronomy  
PhD, University of Rochester, 1982

Emmett Witchel, Associate Professor  
Department of Computer Science  
PhD, Massachusetts Institute of Technology, 2004

Michael David Wittig, Specialist  
School of Biological Sciences  
MA, University of Texas at Austin, 2011

Bogdan J Wlodarczyk, Research Assistant Professor (Affiliated)  
Department of Nutritional Sciences  
DSc, National Veterinary Research Institute, 2002

Brenda D Wolff, Specialist  
School of Biological Sciences  
PhD, University of Texas at Austin, 2011

Jian Wu, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 2007

Robert E Wyatt, Professor  
W. T. Doherty Professorship in Chemistry  
Department of Chemistry and Biochemistry  
Department of Physics  
PhD, Johns Hopkins University, 1965

Bugao Xu, Professor  
Division of Textiles and Apparel  
PhD, University of Maryland College Park, 1992

Weijia Xu, Lecturer  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 2006

Jianhong Xue, Lecturer  
Department of Marine Science  
PhD, State University of New York at Stony Brook, 2008

Xiaoping Yang, Specialist  
College of Natural Sciences  
PhD, Sun Yat-Sen University, 2001

Zhen Yao, Associate Professor  
Department of Physics  
PhD, Harvard University, 1997

Mei Yin, Instructor  
Department of Mathematics  
PhD, University of Arizona, 2010

Lexing Ying, Associate Professor  
Department of Mathematics  
PhD, New York University, 2004

William D Young, Lecturer  
Department of Computer Science

PhD, University of Texas at Austin, 1988

Harold H Zakon, Professor  
Section of Neurobiology  
PhD, Cornell University, 1981

Thaleia Zariphopoulou, Professor  
V. F. Neuhaus Centennial Professorship in Finance  
Department of Mathematics  
PhD, Brown University, 1989

Jay W Zarnikau, Adjunct Professor  
Division of Statistics and Scientific Computation  
PhD, University of Texas at Austin, 1990

Boris Zemelman, Assistant Professor  
Section of Neurobiology  
PhD, Stanford University, 1997

Yan Zhang, Assistant Professor  
Department of Chemistry and Biochemistry  
PhD, The Scripps Research Institute, 2004

Yin Zhang, Associate Professor  
Department of Computer Science  
PhD, Cornell University, 2001

Zhenyu Zhang, Adjunct Professor  
Department of Physics  
PhD, Rutgers the State University of New Jersey Camden Campus,  
1989

Zaiming Zhao, Lecturer  
School of Biological Sciences  
PhD, University of Texas at Austin, 1999

Huiping Zhu, Research Assistant Professor (Affiliated)  
Department of Nutritional Sciences  
PhD, Peking University, 1997

Xiao Y Zhu, Professor  
Louis Nicolas Vauquelin Regents Professorship in Inorganic Chemistry  
Department of Chemistry and Biochemistry  
PhD, University of Texas at Austin, 1989

Gordan Zitkovic, Associate Professor  
Department of Mathematics  
PhD, Columbia University in the City of New York, 2003

David I Zuckerman, Professor  
Professorship in Computer Sciences #1  
Department of Computer Science  
PhD, University of California-Berkeley, 1991

## School of Nursing Faculty

Gayle J Acton, Associate Professor  
School of Nursing  
PhD, University of Texas at Austin, 1993

Mary L Adams, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1990

Marta L Anderson, Instructor in Clinical Nursing



School of Nursing  
MSN, University of Phoenix, 2005

Heather A Becker, Lecturer  
School of Nursing  
PhD, University of Texas at Austin, 1981

Karen L Borich, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1999

Billye J Brown, Professor Emeritus  
School of Nursing  
EdD, Baylor University, 1975

Sharon A Brown, Professor  
Joseph H. Blades Centennial Memorial Professorship in Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1987

Janis L Carelock, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1986

Linda J Carpenter, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, University of Arizona, 1993

Patricia A Carter, Associate Professor  
School of Nursing  
PhD, University of California-Los Angeles, 1999

Sharon L Carter, Instructor in Clinical Nursing  
School of Nursing  
MS, Ball State University, 2011

Angela P Clark, Associate Professor Emeritus  
School of Nursing  
PhD, Texas Woman's University, 1983

Evelyn M Clingerman, Assistant Professor  
School of Nursing  
PhD, The Catholic University of America, 2001

Nola E Cottom, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1977

Jessica Cowen, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Iowa, 2010

Mary A Dale, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1982

Allie De beer, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas - Pan American, 2002

Carol L Delville, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2008

Lisa Doggett, Clinical Associate Professor  
School of Nursing  
MD, Baylor College of Medicine, 1999

Carly E Edgar, Instructor in Clinical Nursing  
School of Nursing  
MSN, Texas Woman's University, 2006

Helen L Erickson, Professor Emeritus  
School of Nursing  
PhD, University of Michigan-Ann Arbor, 1984

Lisa Farrens, Instructor in Clinical Nursing  
School of Nursing  
MSN, Loyola University New Orleans, 2006

Judith L Flanagan, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas Health Science Center at San Antonio, 2002

Eileen Ruth Fowles, Assistant Professor  
School of Nursing  
PhD, Loyola University Chicago, 1994

Jan T Fox, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1971

Nina Marie Fredland, Assistant Professor  
School of Nursing  
PhD, Johns Hopkins University, 2006

Sarah A Fry, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2011

Ruth L Gallman, Professor Emeritus  
School of Nursing  
PhD, , 1970

Alexandra A Garcia, Associate Professor  
School of Nursing  
PhD, University of Texas at Austin, 2002

Carol D Gaskamp, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Kansas Main Campus, 2000

Kelly S Gettig, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2003

Lisa Gonzales, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2009

Corinne E Grimes, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, The Catholic University of America, 1997

Susan J Grobe, Professor Emeritus  
School of Nursing  
PhD, University of Texas at Austin, 1977

Nancy M Guillet de Gutierrez, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2011

Lorraine C Haertel, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1985

Beverly A Hall, Professor Emeritus  
School of Nursing  
PhD, University of Colorado at Boulder, 1974

Patricia L Hamilton-Solum, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2011

Dana H Hannah, Assistant Professor in Clinical Nursing  
School of Nursing  
DNS, Florida Atlantic University, 2010

Tracie C Harrison, Associate Professor  
School of Nursing  
PhD, University of Texas at Austin, 2004

Sakre D Heinze, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2009

Sherry G Hendrickson, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2000

Amy E Holland, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2007

Sharon D Horner, Professor  
Dolores V. Sands Chair in Nursing Research  
School of Nursing  
PhD, Medical College of Georgia, 1992

Gretchen M Inman, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2004

Sheryl A Innerarity, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, Texas Woman's University, 1987

Regina Johnson, Associate Professor  
School of Nursing  
DPH, University of Texas Health Science Center at Houston, 2002

Glenda L Joiner-Rogers, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1988

Barbara A Jones, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1997

Terry L Jones, Assistant Professor  
School of Nursing  
PhD, University of Texas at Austin, 2004

Heather S Keizman, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Florida, 2001

Stephanie M Key, Instructor in Clinical Nursing  
School of Nursing  
MA, University of Texas at Austin, 1999

Eileen K Kintner, Associate Professor  
School of Nursing

PhD, University of Arizona, 1996

Martha M Kowalak-Perez, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas Health Science Center at San Antonio, 1996

Li-Chen Lin, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2009

Stella J Logan, Instructor in Clinical Nursing  
School of Nursing  
MS, Case Western Reserve University, 1976

Reuben R McDaniel, Professor  
Charles and Elizabeth Prothro Regents Chair in Health Care  
Management  
School of Nursing  
EdD, Indiana University at Bloomington, 1971

Martha G Meraviglia, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2001

Cynthia K Milstone, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Phoenix, 1999

Sybil Bowers Momii, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas Medical Branch, 1995

Janice Elaine Moore, Instructor in Clinical Nursing  
School of Nursing  
MS, Texas Woman's University, 1981

Sarah Jane Moore, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2007

Carolyn R Mueller, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1997

Christina L Murphey, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2010

Linda S Murphy, Instructor in Clinical Nursing  
School of Nursing  
MS, Whitworth College, 1987

Donna Nichols, Lecturer  
School of Nursing  
MSEd, James Madison University, 1980

Mary Patricia O'Day, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1985

James J O'Neill, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2008

Robin L Page, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2006

Marilyn M Pattillo, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1983

Shannon H Patton, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1989

Valerie Isham Pellegrino, Instructor in Clinical Nursing  
School of Nursing  
MS, Texas A & M University - Corpus Christi, 1979

Kelley Elaine Pennell, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2007

Joy H Penticuff, Professor Emeritus  
School of Nursing  
PhD, Case Western Reserve University, 1976

Dennis M Perrotta, Adjunct Associate Professor  
School of Nursing  
PhD, University of Texas Health Science Center at Houston, 1982

Sarah C Peters, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1985

Megan E Pfitzinger, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2011

Donna L Rew, Professor  
Denton and Louise Cooley and Family Centennial Professorship in  
Nursing  
School of Nursing  
EdD, Northern Illinois University, 1979

Roberta J Ruiz, Associate Professor  
School of Nursing  
PhD, University of Texas Health Science Center at San Antonio, 1999

Dolores Sands, Professor Emeritus  
School of Nursing  
PhD, Arizona State University Main, 1979

Kendall L Sharp, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2002

Cherie E Simpson, Assistant Professor  
School of Nursing  
PhD, University of Texas at Austin, 2010

Sheila M Smith, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas Health Science Center at San Antonio, 2002

Frances C Sonstein, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 1976

Bobbie S Sterling, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2001

Regina Elaine Stokes, Instructor in Clinical Nursing  
School of Nursing

MSN, University of Texas at Tyler, 2007

Alexa M Stuijbergen, Professor  
Laura Lee Blanton Chair in Nursing, James R. Dougherty, Jr.  
Centennial Professorship in Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1988

Danica Fulbright Sumpster, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Pennsylvania, 2009

Jean C Taxis, Associate Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 2003

Valerie B Thomas, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2002

Whitney A Thurman, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2007

Gayle M Timmerman, Associate Professor  
School of Nursing  
PhD, Ohio State U Main Campus, 1994

Diane O Tyler, Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1994

Deborah L Volker, Associate Professor  
School of Nursing  
PhD, University of Texas at Austin, 1999

Marlene Walden, Professor of Clinical Nursing  
School of Nursing  
PhD, University of Texas at Austin, 1997

Lorraine O Walker, Professor  
Luci B. Johnson Centennial Professorship in Nursing  
School of Nursing  
EdD, Indiana University at Bloomington, 1971

Stacey Lea Ward, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2006

Christina Cardenas Wei, Assistant Professor in Clinical Nursing  
School of Nursing  
PhD, University of Texas Health Science Center at San Antonio, 2009

Elizabeth Ann White, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas at Austin, 2006

Charlotte K Wilson, Instructor in Clinical Nursing  
School of Nursing  
MSN, Texas Woman's University, 1988

Paula J Worley, Instructor in Clinical Nursing  
School of Nursing  
MSN, University of Texas Health Science Center at San Antonio, 2008

Linda H Yoder, Associate Professor  
School of Nursing

PhD, University of Pennsylvania, 1992

## College of Pharmacy Faculty

Creed W Abell, Professor Emeritus

College of Pharmacy

PhD, University of Wisconsin-Madison, 1962

Wyanza R Acosta, Clinical Associate Professor

College of Pharmacy

MS, University of Texas at Austin, 1998

Esosa E Adun, Instructor in Clinical Pharmacy

College of Pharmacy

PharmD, University of Texas at Austin, 2011

Selina M Aguilar, Clinical Assistant Professor

College of Pharmacy

PharmD, University of Texas at Austin, 2008

Lydia Aguilera, Adjunct Assistant Professor

College of Pharmacy

PharmD, University of Florida, 2008

Jon T Albrecht, Clinical Assistant Professor

College of Pharmacy

BS, Auburn University, 1982

Linda S Albrecht, Clinical Assistant Professor

College of Pharmacy

MBA, University of Texas at Arlington, 1990

Angela A Allerman, Clinical Assistant Professor

College of Pharmacy

PharmD, University of Texas at Austin, 1991

Analiza Amaya, Clinical Assistant Professor

College of Pharmacy

PharmD, Texas Southern University, 1994

Jaime P Anaya, Clinical Assistant Professor

College of Pharmacy

PharmD, University of New Mexico Main Campus, 1999

Megan E Anderson, Instructor in Clinical Pharmacy

College of Pharmacy

PharmD, Lake Erie College of Osteopathic Medicine, 2010

Joe M Angel, Research Associate Professor (Affiliated)

College of Pharmacy

PhD, University of Texas Health Science Center at Houston, 1982

Grant Watson Armstrong, Adjunct Assistant Professor

College of Pharmacy

PharmD, University of Texas at Austin, 2007

Bernadette D Asias, Instructor in Clinical Pharmacy

College of Pharmacy

PharmD, University of Houston, 2011

Kristen M Bader, Clinical Instructor

College of Pharmacy

BS, Drake University, 1983

Alexis Leigh Balko, Clinical Instructor

College of Pharmacy

PharmD, University of Texas at Austin, 2006

Jamie C Barner, Professor

College of Pharmacy

PhD, Purdue University Main Campus, 1998

James N Barnes, Clinical Assistant Professor

College of Pharmacy

PharmD, University of Texas at Austin, 2005

Colleen A Barthol, Adjunct Assistant Professor

College of Pharmacy

PharmD, University of Missouri - Kansas City, 1998

Rachel Leah Basinger, Instructor in Clinical Pharmacy

College of Pharmacy

PharmD, University of Texas at Austin, 2011

Maryam Bayat, Clinical Assistant Professor

College of Pharmacy

PharmD, Texas Southern University, 1994

Oralia V Bazaldua, Clinical Assistant Professor

College of Pharmacy

PharmD, University of Oklahoma Health Sciences Center, 1996

William Benefield, Clinical Assistant Professor

College of Pharmacy

PharmD, University of Texas at Austin, 1991

Tawny L Bettinger, Adjunct Assistant Professor

College of Pharmacy

PharmD, University of Illinois at Chicago, 1998

Roland A Bodmeier, Adjunct Associate Professor

College of Pharmacy

PhD, University of Texas at Austin, 1986

Douglas J Borys, Clinical Assistant Professor

College of Pharmacy

PharmD, Shenandoah University, 2004

Phillip D Bowman, Adjunct Assistant Professor

College of Pharmacy

PhD, University of California-Santa Cruz, 1975

Rebecca L Brady, Clinical Instructor

College of Pharmacy

PharmD, University of Texas at Austin, 2006

Fred S Brinkley, Lecturer

College of Pharmacy

MBA, University of Texas at Austin, 1983

Carolyn M Brown, Professor

College of Pharmacy

PhD, University of Florida, 1994

Barry A Browne, Clinical Associate Professor

College of Pharmacy

PharmD, University of Texas at Austin, 1987

Aaron R Buchan, Adjunct Assistant Professor

College of Pharmacy

PharmD, University of Texas at Austin, 2001

David S Burgess, Clinical Professor



College of Pharmacy  
PharmD, Medical University of South Carolina, 1990

Donna R Burgess, Adjunct Assistant Professor  
College of Pharmacy  
BS, Medical University of South Carolina, 1989

Donna M Burkett, Clinical Associate Professor  
College of Pharmacy  
MS, University of Texas at Austin, 2000

Gloria C Caballero, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of the Incarnate Word, 2010

Cris Cabello De Martinez, Senior Lecturer  
College of Pharmacy  
PhD, University of Texas at Austin, 1993

Richard M Cadle, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of the Pacific, 1983

Angela Hughes Campbell, Clinical Instructor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2005

Todd W Canada, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1993

Patricia L Canales, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1995

Chi-Yim J Chan-Lam, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of California-San Francisco, 1986

Charlene A Church, Clinical Instructor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1996

Andrea L Coffee, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1994

Claudia S Colombo, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Saint Louis College of Pharmacy, 2002

Alan B Combs, Professor  
College of Pharmacy  
PhD, University of California-Davis, 1970

Claudio J Conti, Adjunct Professor  
College of Pharmacy  
PhD, University of Buenos Aires, 1983

Toby L Cooper, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Texas Tech University, 2001

Vicki S Crane, Clinical Assistant Professor  
College of Pharmacy  
MBA, University of Dallas, 1989

David P Crews, Professor

College of Pharmacy  
PhD, Rutgers the State University of New Jersey Newark Campus,  
1973

Miles L Crismon, Professor  
James T. Doluisio Regents Chair in Pharmacy, Behrens Inc.  
Centennial Professorship in Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 1979

Barrett R Crowther, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Wisconsin-Madison, 2009

Maria A Croyle, Associate Professor  
College of Pharmacy  
PhD, University of Michigan-Ann Arbor, 1997

Zhengrong Cui, Associate Professor  
College of Pharmacy  
PhD, University of Kentucky, 2002

Nicole L Cupples, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, The University of Findlay, 2010

Kevin N Dalby, Associate Professor  
College of Pharmacy  
PhD, University of Cambridge, 1992

James A Dasher, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Arkansas for Medical Sciences, 1996

Joseph F Dasta, Adjunct Professor  
College of Pharmacy  
MS, Ohio State U Main Campus, 1976

Patrick J Davis, Professor  
Eckerd Centennial Professorship in Pharmacy  
College of Pharmacy  
PhD, University of Iowa, 1976

Taniyah N Dawson, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Florida Agricultural and Mechanical University, 2011

Mike De Luna, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Texas A & M University - Kingsville, 2011

Jennifer L Defilippi, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Rutgers the State University of New Jersey New Brunswick  
Campus, 1997

John Digiovanni, Professor  
College of Pharmacy  
PhD, University of Washington - Seattle, 1978

Brian C Dinh, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Houston, 2011

Heather H Dobie, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of North Carolina at Chapel Hill, 1997

James T Doluisio, Professor Emeritus  
College of Pharmacy  
PhD, Purdue University Main Campus, 1962

Eric C Dougherty, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2004

Staci Lynn Dufrene, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Albany College of Pharmacy of Union University, 2007

Bryson M Duhon, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

James R Dunlap, Clinical Assistant Professor  
College of Pharmacy  
PhD, Texas A & M University, 1977

Christine L Duvauchoelle, Associate Professor  
College of Pharmacy  
PhD, University of California-Santa Barbara, 1991

Kathryn E Dzintars, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Pittsburgh, Pittsburgh Campus, 2003

Kelly L Echevarria, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Creighton University, 1997

George A Edwards, Clinical Associate Professor  
College of Pharmacy  
MD, Baylor University, 1972

Elizabeth J Engel, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Houston, 2011

Carlton K Erickson, Professor  
Pfizer Centennial Professorship in Pharmacy  
College of Pharmacy  
PhD, Purdue University Main Campus, 1965

Richard R Espinosa, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2001

Lisa E Farnett, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas Health Science Center at San Antonio, 1988

Roger P Farrar, Professor  
College of Pharmacy  
PhD, University of Massachusetts, 1976

Walter L Fast, Associate Professor  
College of Pharmacy  
PhD, Northwestern University, 1998

Kristin R Fiebelkorn, Adjunct Associate Professor  
College of Pharmacy  
MD, Johns Hopkins University, 1996

Jerry Fineg, Professor Emeritus  
College of Pharmacy

DVM, Texas A & M University, 1953

Susan M Fischer, Adjunct Professor  
College of Pharmacy  
PhD, University of Wyoming, 1974

Kentya C Ford, Assistant Professor  
College of Pharmacy  
DPH, University of Texas Health Science Center at Houston, 2005

Cynthia A Foslien, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Nebraska Medical Center, 1985

Ana Crystal Franco, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2007

Alan Frazer, Adjunct Professor  
College of Pharmacy  
PhD, Peninsula College, 1969

Christopher R Frei, Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2001

Conrado D Gamboa, Adjunct Assistant Professor  
College of Pharmacy  
BS, University of Texas at Austin, 1985

Anita A Garcia, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2002

David B Garcia, Adjunct Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 1977

Stephanie Garrett, Clinical Assistant Professor  
College of Pharmacy  
PharmD, West Virginia University, 1997

Gavino A Garza, Clinical Instructor  
College of Pharmacy  
BS, University of Houston, 1981

Jodie S Gee, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Houston, 2009

Theresa M Gerst, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Texas Tech University Health Sciences Center, 2007

Diane B Ginsburg, Clinical Professor  
College of Pharmacy  
MS, University of Houston, 1990

Paul J Godley, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1984

Nishi S Goel, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2008

Cristina Gonzales, Instructor in Clinical Pharmacy  
College of Pharmacy

PharmD, Texas A & M University - Kingsville, 2011

Rueben A Gonzales, Professor  
Jacques P. Servier Regents Professorship in Pharmacy  
College of Pharmacy  
PhD, University of Texas at Austin, 1983

F Gonzalez-Lima, Professor  
George I. Sanchez Centennial Professorship in Liberal Arts  
College of Pharmacy  
PhD, University of Pr Medical Sciences, 1980

Andrea C Gore, Professor  
College of Pharmacy  
PhD, University of Wisconsin-Madison, 1990

Stephen J Gore, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Oklahoma Norman Campus, 1996

Roberta L Grant, Adjunct Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 1995

Belinda K Green, Adjunct Assistant Professor  
College of Pharmacy  
BS, University of Texas at Austin, 1990

Veronica I Guerra, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Thomas D Guidry, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1982

Catherine S Hall, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1999

Reed C Hall, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Midwestern University, 2007

R A Harris, Professor  
M. June and J. Virgil Waggoner Chair in Molecular Biology  
College of Pharmacy  
PhD, University of North Carolina at Chapel Hill, 1973

Daniel R Hernandez, Clinical Instructor  
College of Pharmacy  
BS, University of Texas at Austin, 1992

Jon D Herrington, Adjunct Associate Professor  
College of Pharmacy  
PharmD, Saint Louis College of Pharmacy, 1992

Russell A Higgins, Adjunct Assistant Professor  
College of Pharmacy  
MD, University of New Mexico Main Campus, 2002

Tuyen K Ho, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2002

Prudence O Hofmann, Adjunct Assistant Professor  
College of Pharmacy

PharmD, University of Texas at Austin, 2008

Eugene P Holder, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1994

Collin A Hovinga, Clinical Associate Professor  
College of Pharmacy  
PharmD, Creighton University, 1997

John K Huang, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2003

Darrel W Hughes, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2006

Barry L Hull, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Southern California, 1983

Stephen D Hursting, Professor  
Margaret McKean Love Chair in Nutrition, Cellular and Molecular  
Sciences  
College of Pharmacy  
PhD, University of North Carolina at Chapel Hill, 1992

Robert G Huth, Clinical Assistant Professor  
College of Pharmacy  
MD, George Washington University, 1986

Kandi K Icenhower, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Houston, 2010

Delaney R Ivy, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2010

John L Ivy, Professor  
Teresa Lozano Long Endowed Chair in Kinesiology and Health  
Education  
College of Pharmacy  
PhD, University of Maryland College Park, 1976

Susana James, Adjunct Assistant Professor  
College of Pharmacy  
MFA, University of Texas at El Paso, 1998

Julia A Janich, Clinical Instructor  
College of Pharmacy  
PhD, University of Texas at Austin, 2002

Theresa C Jaso, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2001

David G Johnson, Adjunct Associate Professor  
College of Pharmacy  
PhD, University of Texas Southwestern Medical Center at Dallas, 1991

Melissa A Johnson, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1997

Vivian B Johnson, Clinical Assistant Professor  
College of Pharmacy

PhD, Mercer U Sthn School Phar, 1983

Jason R Jokerst, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Nebraska Medical Center, 2005

Sharon A Jung, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas Health Science Center at San Antonio, 1995

James A Karboski, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Texas at San Antonio, 1988

Nicole R Keller, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Tennessee, 2005

Dean L Kellogg, Adjunct Professor  
College of Pharmacy  
PhD, University of Texas Health Science Center at San Antonio, 1989

Jackson M Kelly, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of New Mexico Main Campus, 2011

Monte A Kenaston, Adjunct Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 2010

Sean M Kerwin, Associate Professor  
College of Pharmacy  
PhD, University of California-Berkeley, 1989

Marcia L Kiger, Clinical Instructor  
College of Pharmacy  
BS, University of Texas at Austin, 1982

Kaoru Kiguchi, Research Professor (Affiliated)  
College of Pharmacy  
MD, Jikei University School of Medicine, 1974

Christine K Kim, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Houston, 2011

Lisa H Kim, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of North Carolina at Chapel Hill, 2011

William A Klein, Clinical Instructor  
College of Pharmacy  
BS, University of Louisiana at Monroe, 1970

Kristina J Klein-Bradham, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2004

Kimberly Kline, Professor  
Julian C. Barton Professorship in Nutrition  
College of Pharmacy  
PhD, University of Texas at Austin, 1985

Jodi M Klocek, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Mississippi, 1996

William A Kloesel, Distinguished Senior Lecturer  
College of Pharmacy  
BS, University of Texas at Austin, 1962

Leroy C Knodel, Clinical Professor  
College of Pharmacy  
PharmD, University of Kentucky, 1980

Jim M Koeller, Professor  
College of Pharmacy  
MS, University of Wisconsin-Madison, 1980

John J Koleng, Adjunct Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 2002

Lori Krustchinsky, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Houston, 2011

John G Kuhn, Professor Emeritus  
College of Pharmacy  
PharmD, University of Texas Health Science Center at San Antonio, 1977

Phillip H Lai, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2007

Yui-Wing F Lam, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Minnesota-Twin Cities, 1984

Kenneth A Lawson, Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 1992

Leon Lee, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Kentucky, 1996

Seongmin Lee, Assistant Professor  
College of Pharmacy  
PhD, Purdue University Main Campus, 2004

Yunkyung Lee, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Rhode Island, 2011

Steven W Leslie, Professor  
James E. Bauerle Centennial Professorship in Drug Dynamics  
College of Pharmacy  
PhD, Purdue University Main Campus, 1974

Mitchell R Lestico, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Wisconsin-Madison, 1992

James S Lewis, Clinical Assistant Professor  
College of Pharmacy  
PhD, Washington State University, 1997

John H Littlefield, Clinical Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 1975

Louis C Littlefield, Professor Emeritus  
College of Pharmacy



PharmD, University of Southern California, 1967

Hung-Wen Liu, Professor  
George H. Hitchings Regents Chair in Drug Design  
College of Pharmacy  
PhD, Columbia University in the City of New York, 1981

Debra A Lopez, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1999

Amanda M Loya, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2003

Stephen Philip Lozano, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Charlotte A Luebbert, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Creighton University, 1995

Cindy Luu, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2008

Michael C Macleod, Adjunct Professor  
College of Pharmacy  
PhD, University of Oregon, 1974

Christopher P Martin, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Texas Tech University Health Sciences Center, 2003

Emory S Martin, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of California-San Francisco, 1984

Brigetta R Martinez, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Houston, 2007

Cynthia A Mascarenas, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2001

Brian Masek, Adjunct Professor  
College of Pharmacy  
PhD, California Institute of Technology, 1987

Pamela R Maxwell, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1994

Theresa A Mays Hutchings, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Oklahoma Health Sciences Center, 1994

Jason T McConville, Assistant Professor  
College of Pharmacy  
PhD, University of Strathclyde, 2002

James W McGinity, Professor  
Johnson & Johnson Centennial Chair in Pharmacy  
College of Pharmacy  
PhD, University of Iowa, 1972

William J McIntyre, Clinical Professor  
College of Pharmacy  
PharmD, Wayne State University, 1988

Megan A McKee, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Arizona, 2008

Nicole L McMaster, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Missouri - Kansas City, 2002

Mina Mehvar, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2010

April Ann Messett, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2007

Lisa M Mican, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2000

S J Mihic, Associate Professor  
College of Pharmacy  
PhD, University of Toronto, 1992

Lysbeth W Miller, Clinical Assistant Professor  
College of Pharmacy  
MD, University of Texas Health Science Center at San Antonio, 1979

Edward M Mills, Associate Professor  
College of Pharmacy  
PhD, Purdue University Main Campus, 1997

Deirdre M Monroe, Clinical Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 2003

Karen E Moody, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2000

Eugene Moore, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Southeastern University, 1992

Tera D Moore, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of New Mexico Main Campus, 2003

Troy A Moore, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of New Mexico Main Campus, 2003

Vanessa K Morales, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2004

Clarissa Moreno, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Texas Tech University Health Sciences Center, 2003

Richard A Morrisett, Professor  
College of Pharmacy  
PhD, University of Alabama at Birmingham, 1986

Jacquelyn Padilla Navarrete, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2009

Jenny S Ngo, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2008

Thanh hao T Ngo, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Oklahoma Health Sciences Center, 2003

Suzanne Novak, Clinical Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 2005

Dannielle C O'Donnell, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Rutgers the State University of New Jersey Camden Campus, 1993

John T O'Neill, Adjunct Assistant Professor  
College of Pharmacy  
Diploma (High School), , 1951

Elizabeth A Oates, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2010

Theresa Onukaogu, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Roseman University of Health Sciences, 2011

Ian W Pace, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1999

Margie E Padilla, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2005

Neil C Pan, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2005

Deepali S Parikh, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Pittsburgh, Pittsburgh Campus, 1999

Wayne R Patterson, Adjunct Associate Professor  
College of Pharmacy  
PhD, Michigan State University, East Lansing, 1986

Liza J Paul, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Florida, 2004

Heather A Payton, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Saint Louis College of Pharmacy, 2010

Robert Pearlman, Professor Emeritus  
College of Pharmacy  
PhD, University of Michigan-Ann Arbor, 1975

Jodie L Pepin, Clinical Assistant Professor  
College of Pharmacy

PharmD, University of Texas at Austin, 2001

Nikolaos A Peppas, Professor  
Fletcher Stuckey Pratt Chair in Engineering, Cockrell Family Chair for Departmental Leadership #1  
College of Pharmacy  
ScD, Massachusetts Institute of Technology, 1973

Elizabeth F Perz, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1995

Jay I Peters, Adjunct Professor  
College of Pharmacy  
MD, Baylor College of Medicine, 1977

Patrick S Pevoto, Clinical Assistant Professor  
College of Pharmacy  
MD, University of Texas Medical Branch, 1983

Robert N Pinckard, Adjunct Professor  
College of Pharmacy  
PhD, University of Edinburgh, 1967

Gloria Sosa Pinto, Adjunct Assistant Professor  
College of Pharmacy  
MA, University of Texas - Pan American, 1996

Igor Ponomarev, Research Assistant Professor (Affiliated)  
College of Pharmacy  
PhD, Oregon Health and Science University, 2002

Nathan D Pope, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Rutgers the State University of New Jersey New Brunswick Campus, 2002

Roger P Potyk, Clinical Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 1989

Tiffany A Putsche, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Gabriel J Quintanilla, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2002

Joelle E Radosevich, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Midwestern University, 2011

Debra D Ramirez, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Isidro Ramirez, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2003

Karen L Rascati, Professor  
Stewart Turley/Eckerd Corporation Centennial Endowed Professorship in Pharmacy  
College of Pharmacy  
PhD, University of Florida, 1986

Kristin C Reed, Adjunct Assistant Professor

College of Pharmacy  
PharmD, Auburn University, 2007

Robert T Reilly, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Utah, 1984

Ann L Richards, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Nebraska Medical Center, 1981

Joanne F Richards, Senior Lecturer  
College of Pharmacy  
PhD, Iowa State University, 1975

John H Richburg, Professor  
College of Pharmacy  
PhD, Rutgers the State University of New Jersey Camden Campus,  
1993

Anne E Rider, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, The University of Montana, 2011

Jennifer L Ridings-Myhra, Clinical Associate Professor  
College of Pharmacy  
BS, University of Texas at Austin, 1978

Jose O Rivera, Clinical Professor  
College of Pharmacy  
PharmD, University of Kentucky, 1979

Rochelle Mendiola Roberts, Lecturer  
College of Pharmacy  
PhD, University of Texas at Austin, 2008

Carrie E Rogers, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2008

Susan J Rogers, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Michigan-Ann Arbor, 1975

Rebecca A Rottman, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Southern California, 2003

John W Rudder, Clinical Instructor  
College of Pharmacy  
BS, University of Texas at Austin, 1983

Veronica C Rudder, Clinical Instructor  
College of Pharmacy  
BD, University of Texas at Austin, 1983

Andres D Ruiz, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2008

Augustus J Rush, Adjunct Professor  
College of Pharmacy  
MD, Columbia University in the City of New York, 1968

Sharon K Rush, Clinical Assistant Professor  
College of Pharmacy  
BS, University of Texas at Austin, 1986

Laurajo Ryan, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2000

Paula G Rychlik, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2005

Stephen R Saklad, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Southern California, 1978

Amista L Salcido, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Arizona, 1998

Bob G Sanders, Professor  
College of Pharmacy  
PhD, Penn State University Park, 1961

Rosa N Schnyer, Clinical Assistant Professor  
College of Pharmacy  
DAOM, Oregon College of Oriental Medicine, 2008

Jennifer K Seltzer, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas Health Science Center at San Antonio,  
1984

Thomas C Shank, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Tennessee Health Science Center, 1983

William P Sharp, Adjunct Assistant Professor  
College of Pharmacy  
BS, University of Texas at Austin, 1976

Marvin D Shepherd, Professor  
Clifford L. Klinck, Jr. Centennial Professorship in Pharmacy  
Administration  
College of Pharmacy  
PhD, Purdue University Main Campus, 1980

Jeri J Sias, Clinical Associate Professor  
College of Pharmacy  
PharmD, University of Kansas Main Campus, 1998

Leslie R Simien, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of California-San Francisco, 2011

Adam Steven Smith, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Nebraska at Omaha, 2011

Ashley G Smith, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Louisiana at Monroe, 2008

Hugh D Smyth, Associate Professor  
College of Pharmacy  
PhD, University of Otago, 2000

Morgan Camille Tunnell Snyder, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Kentucky, 2010

Rose Sohraby, Instructor in Clinical Pharmacy

College of Pharmacy  
PharmD, University of Missouri - Kansas City, 2011

Sara L Solis, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Jasmine N Spittles, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Kansas Main Campus, 2011

Maaya Srinivasa, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Texas A & M University - Kingsville, 2011

Salomon A Stavchansky, Professor  
Alcon Centennial Professorship in Pharmacy  
College of Pharmacy  
PhD, University of Kentucky, 1974

Daniel J Still, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Creighton University, 1993

Scott A Strassels, Assistant Professor  
College of Pharmacy  
PhD, University of Washington - Seattle, 2005

Kimberly K Summers, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Missouri - Kansas City, 1995

Patricia A Tabor, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1983

Sharla K Tajchman, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Rutgers the State University of New Jersey Camden  
Campus, 2007

Robert L Talbert, Professor  
Smithkline Centennial Professorship in Pharmacy  
College of Pharmacy  
PharmD, University of Kentucky, 1974

Dean G Tang, Adjunct Associate Professor  
College of Pharmacy  
PhD, Wayne State University, 1994

Jodi L Taraba, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, Drake University, 2001

Yasar O Tasnif, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2002

Holli L Temple, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1999

Derek Justin Templet, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Diamond I Thomas, Instructor in Clinical Pharmacy  
College of Pharmacy

PharmD, Xavier University of Louisiana, 2011

Shana K Trice, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1997

Curtis L Triplitt, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1995

Rebecca G Twombly, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of North Carolina at Chapel Hill, 2001

Brandon G Utter, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Kansas Main Campus, 2011

Kenneth J Utz, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Oklahoma Health Sciences Center, 2006

Carla L Vandenberg, Associate Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1991

Karen Marie Vasquez, Professor  
College of Pharmacy  
PhD, Baylor College of Medicine, 1996

Susie A Vasquez, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1997

Rene A Verduzco, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

John F Villanacci, Adjunct Associate Professor  
College of Pharmacy  
PhD, University of Michigan-Ann Arbor, 1983

Sarah M Villarreal, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Texas Tech University Health Sciences Center, 2010

Leticia R Villela, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2003

Kristie A Vinklerek, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2001

Cheryl L Walker, Adjunct Professor  
College of Pharmacy  
PhD, Tex Hlth Sci C Dallas, U, 1984

Janet C Walkow, Clinical Associate Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 1982

Charles A Walton, Professor Emeritus  
College of Pharmacy  
PhD, Purdue University Main Campus, 1956

Guliang Wang, Research Assistant Professor (Affiliated)  
College of Pharmacy



PhD, Zhejiang University, 2002

Katherine K Wang, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, Texas A & M University - Kingsville, 2011

Alan Bayard Watts, Adjunct Assistant Professor  
College of Pharmacy  
PhD, University of Texas at Austin, 2009

Christian P Whitman, Professor  
Romeo T. Bachand, Jr. Regents Professorship in Pharmacy  
College of Pharmacy  
PhD, University of California-San Francisco, 1984

Nathan P Wiederhold, Associate Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2000

Richard E Wilcox, Professor  
College of Pharmacy  
PhD, Southern Illinois University Carbondale, 1976

Robert O Williams, Professor  
Johnson & Johnson Centennial Professorship in Pharmacy  
College of Pharmacy  
PhD, University of Texas at Austin, 1986

James P Wilson, Associate Professor  
College of Pharmacy  
PhD, Purdue University Main Campus, 1986

Holly N Winkler, Clinical Instructor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2006

Stewart R Wirebaugh, Clinical Assistant Professor  
College of Pharmacy  
PharmD, University of Illinois at Urbana-Champaign, 1987

Mark J Wong, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2004

Billy W Woodward, Clinical Associate Professor  
College of Pharmacy  
BS, University of Texas at Austin, 1963

Consuelo M Worley, Clinical Assistant Professor  
College of Pharmacy  
MS, University of Texas at Austin, 2002

Casey W Wright, Assistant Professor  
College of Pharmacy  
PhD, Kansas State University, 2003

Chanin C Wright, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2001

Robert Wright, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 1996

Bin Xiao, Instructor in Clinical Pharmacy  
College of Pharmacy  
PharmD, University of Texas at Austin, 2011

Weiling Yin, Clinical Instructor  
College of Pharmacy  
PhD, University of Texas at Austin, 2008

Veronica S Young, Clinical Assistant Professor  
College of Pharmacy  
PharmD, Creighton University, 1993

Stephanie Rose Younts, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas at Austin, 2005

Edward M Zastawny, Adjunct Assistant Professor  
College of Pharmacy  
PharmD, University of Texas Health Science Center at San Antonio,  
1991

## Lyndon B. Johnson School of Public Affairs Faculty

Jacqueline L Angel, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Rutgers the State University of New Jersey New Brunswick  
Campus, 1989

Robert D Auerbach, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Chicago, 1969

Kevin M Bacon, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
MS, London School of Economics and Political Science, 1978

Terrell Blodgett, Professor Emeritus  
Lyndon B. Johnson School of Public Affairs  
MS, Syracuse University Main Campus, 1947

Leigh B Boske, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Pittsburgh, Pittsburgh Campus, 1973

Joshua W Busby, Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Georgetown University, 2004

Jennifer Lynne Bussell, Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of California-Berkeley, 2009

Benedicte Callan, Lecturer  
Lyndon B. Johnson School of Public Affairs  
PhD, University of California-Berkeley, 1995

Katherine Canales, Adjunct Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
BS, Stanford University, 2001

Michael E Conroy, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Illinois at Urbana-Champaign, 1972

Michele Y Deitch, Senior Lecturer  
Lyndon B. Johnson School of Public Affairs

JD, Harvard University, 1986

Edwin Dorn, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Yale University, 1978

David J Eaton, Professor  
Bess Harris Jones Centennial Professorship in Natural Resource  
Policy Studies  
Lyndon B. Johnson School of Public Affairs  
PhD, Johns Hopkins University, 1977

Sarah Eckhardt, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
JD, University of Texas at Austin, 1998

Sheldon Ekland-Olson, Professor  
Amy Johnson McLaughlin Administrative Chair in Human Ecology,  
Rapoport Centennial Professorship of Liberal Arts  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Washington - Seattle, 1971

Angela Maria Evans, Clinical Professor  
Lyndon B. Johnson School of Public Affairs  
MA, University of Wisconsin-Madison, 1971

Kenneth Flamm, Professor  
Dean Rusk Chair in the Lyndon Baines Johnson School of Public  
Affairs  
Lyndon B. Johnson School of Public Affairs  
PhD, Massachusetts Institute of Technology, 1979

Matthew Flynn, Lecturer  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Texas at Austin, 2010

Peter J Frumkin, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Chicago, 1997

James K Galbraith, Professor  
Lloyd M. Bentsen, Jr. Chair in Government/Business Relations  
Lyndon B. Johnson School of Public Affairs  
PhD, Yale University, 1981

Shama Gamkhar, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Maryland College Park, 1996

Francis J Gavin, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Pennsylvania, 1997

Charles E Gholz, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Massachusetts Institute of Technology, 2000

Kenneth L Gladish, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Virginia, 1985

Michael H Granof, Professor  
Ernst & Young Distinguished Centennial Professorship of Accounting  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Michigan-Ann Arbor, 1972

Sherri R Greenberg, Lecturer

Lyndon B. Johnson School of Public Affairs  
MSc, University of London, 1981

Charles G Groat, Professor  
John A. and Katherine G. Jackson Chair in Energy and Mineral  
Resources  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Texas at Austin, 1970

Dagmar S Hamilton, Professor Emeritus  
Lyndon B. Johnson School of Public Affairs  
JD, American University in Cairo, 1961

Carolyn Heinrich, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Chicago, 1995

Jefferson D Howell, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
MA, University of Texas at Austin, 1970

Robert L Hutchings, Professor  
J. J. "Jake" Pickle Regents Chair in Public Affairs  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Virginia, 1979

Alejandro Ibarra, Visiting Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Instituto Tecnológico y de Estudios Superiores de Monterrey,  
1998

William Inboden, Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Yale University, 2003

Bobby R Inman, Professor  
Lyndon B. Johnson Centennial Chair in National Policy  
Lyndon B. Johnson School of Public Affairs  
BA, University of Texas at Austin, 1950

Bryan Davidson Jones, Professor  
J. J. "Jake" Pickle Regents Chair in Congressional Studies  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Texas at Austin, 1970

Ethan B Kapstein, Professor  
Dennis O'Connor Regents Professorship in Business  
Lyndon B. Johnson School of Public Affairs  
PhD, Tufts University, 1986

Christopher T King, Lecturer  
Lyndon B. Johnson School of Public Affairs  
PhD, Michigan State University, East Lansing, 1976

Meeta Kothare, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Rochester, 1992

Alan J Kuperman, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Massachusetts Institute of Technology, 2002

Jane Lincove, Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Southern California, 2005

Leigh L Linden, Assistant Professor

Lyndon B. Johnson School of Public Affairs  
PhD, Massachusetts Institute of Technology, 2004

Laurence E Lynn, Research Professor (Affiliated)  
Lyndon B. Johnson School of Public Affairs  
PhD, Yale University, 1966

Hans M Mark, Professor  
John J. McKetta Centennial Energy Chair in Engineering  
Lyndon B. Johnson School of Public Affairs  
PhD, Massachusetts Institute of Technology, 1954

F R Marshall, Professor Emeritus  
Audre and Bernard Rapoport Centennial Chair in Economics and  
Public Affairs  
Lyndon B. Johnson School of Public Affairs  
PhD, University of California-Berkeley, 1954

Kenneth M Matwiczak, Senior Lecturer  
Lyndon B. Johnson School of Public Affairs  
PhD, Texas A & M University, 1990

Mary K McCaston, Adjunct Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
MA, University of Arizona, 1991

Ronald Keith McMullen, Visiting Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Iowa, 1985

Cynthia Osborne Blaha, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Princeton University, 2003

Francie Ostrower, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Yale University, 1991

Miguel A Pavon, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
MS, Instituto Tecnológico y de Estudios Superiores de Monterrey,  
1995

Howard T Prince, Clinical Professor  
Loyd Hackler Endowed Chair in Ethical Leadership  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Texas at Austin, 1975

Varun Rai, Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Stanford University, 2008

Lorinc Redei, Adjunct Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
MA, Georgetown University, 2003

Sarah Jane Rehnberg, Lecturer  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Pittsburgh, Pittsburgh Campus, 1983

Lodis Rhodes, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Nebraska - Lincoln, 1972

Victoria Rodriguez, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of California-Berkeley, 1987

William Paul Ruger, Adjunct Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Brandeis University, 2003

Jurgen Schmandt, Professor Emeritus  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Bonn, 1956

Richard L Schott, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Syracuse University Main Campus, 1972

Max Sherman, Professor Emeritus  
Lyndon B. Johnson School of Public Affairs  
JD, University of Texas at Austin, 1960

Evan A Smith, Lecturer  
Lyndon B. Johnson School of Public Affairs  
MA, Northwestern University, 1988

Niyanta P Spelman, Adjunct Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
MPAff, University of Texas at Austin, 1994

William G Spelman, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Harvard University, 1988

Paul J Stekler, Professor  
Wofford Denius Chair in Entertainment Studies  
Lyndon B. Johnson School of Public Affairs  
PhD, Harvard University, 1983

Chandler W Stolp, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Carnegie Mellon University, 1982

Jeremi Suri, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, Yale University, 2001

Kenneth W Tolo, Professor Emeritus  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Nebraska - Lincoln, 1968

Philip U Treisman, Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of California-Berkeley, 1985

Paul Von hippel, Assistant Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, The Ohio State University Main Campus, 2010

Charles M Walton, Professor  
Ernest H. Cockrell Centennial Chair in Engineering  
Lyndon B. Johnson School of Public Affairs  
PhD, North Carolina State University, 1971

Peter Ward, Professor  
C. B. Smith, Sr. Centennial Chair in United States-Mexico Relations #4  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Liverpool, 1976

David C Warner, Professor  
Wilbur J. Cohen Professorship in Health and Social Policy  
Lyndon B. Johnson School of Public Affairs  
PhD, Syracuse University Main Campus, 1969

Ruth Ellen Wasem, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Michigan-Ann Arbor, 1990

Catherine Elizabeth Weaver, Associate Professor  
Tom Slick Memorial Trust for the University of Texas at Austin  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Wisconsin-Madison, 2003

Sidney Weintraub, Professor Emeritus  
Lyndon B. Johnson School of Public Affairs  
PhD, American University, 1966

Robert H Wilson, Professor  
Mike Hogg Professorship of Urban Policy  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Pennsylvania, 1979

Patrick P Wong, Associate Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Wisconsin-Madison, 1988

Jay W Zarnikau, Adjunct Professor  
Lyndon B. Johnson School of Public Affairs  
PhD, University of Texas at Austin, 1990

## School of Social Work Faculty

Marian A Aguilar, Lecturer  
School of Social Work  
PhD, University of Illinois at Urbana-Champaign, 1983

Barbara S Anderson, Clinical Associate Professor  
School of Social Work  
MSSW, University of Texas at Austin, 1974

Kathleen F Armenta, Clinical Associate Professor  
School of Social Work  
MSW, University of Arizona, 1973

Marilyn Armour, Associate Professor  
School of Social Work  
PhD, University of Minnesota-Twin Cities, 2000

Norton L Armour, Lecturer  
School of Social Work  
JD, University of Michigan-Ann Arbor, 1955

Margaret M Bassett, Lecturer  
School of Social Work  
MS, Northern Illinois University, 1990

Holly J Bell, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1999

Michael S Bergman, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2004

Ronald C Bounous, Professor Emeritus  
School of Social Work  
PhD, University of Minnesota-Duluth, 1965

Noel B Busch-Armendariz, Associate Professor

School of Social Work  
PhD, University of South Carolina - Columbia, 2000

Yessenia Castro, Assistant Professor  
School of Social Work  
PhD, Florida State University, 2008

Namkee Choi, Professor  
School of Social Work  
PhD, University of California-Berkeley, 1987

Patricia A Cody, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2007

Lori Lewis Conerly, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2006

Catherine Cubbin, Associate Professor  
School of Social Work  
PhD, Johns Hopkins University, 1998

Morgan J Curtis, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2006

Thomas J Darwin, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1995

Heather L Davies, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2004

King E Davis, Professor  
The Robert Lee Sutherland Chair in Mental Health and Social Policy  
School of Social Work  
PhD, Brandeis University, 1972

Denise V De La Garza, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1991

Susan De Luca, Assistant Professor  
School of Social Work  
PhD, Ohio State U Main Campus, 2009

Diana M Dinitto, Professor  
Cullen Trust Centennial Professorship in Alcohol Studies and Education  
School of Social Work  
PhD, Florida State University, 1980

Howard Daniels Duncan, Lecturer  
School of Social Work  
MSW, Arizona State University Main, 1975

David L Evans, Lecturer  
School of Social Work  
MA, Oakland University, 1976

Ruth N Fagan, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1995

Monica R Faulkner, Lecturer  
School of Social Work



PhD, University of Texas at Austin, 2010

Michael J Ferguson, Associate Professor  
School of Social Work  
PhD, University of Washington - Seattle, 1999

Craig A Field, Research Associate Professor (Affiliated)  
School of Social Work  
PhD, University of Texas Southwestern Medical Center at Dallas, 1998

Rowena Fong, Professor  
Ruby Lee Piester Centennial Professorship in Services to Children and Families  
School of Social Work  
EdD, Harvard University, 1990

Cynthia G Franklin, Professor  
Stiernberg/Spencer Family Professorship in Mental Health  
School of Social Work  
PhD, University of Texas at Arlington, 1989

Bethany E Gerlach, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2011

Dorie J Gilbert, Associate Professor  
School of Social Work  
PhD, University of Texas at Austin, 1996

Sandra A Graham, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2006

Mary Teresa Granillo, Assistant Professor  
School of Social Work  
PhD, University of Michigan-Ann Arbor, 2011

Darlene Grant, Associate Professor  
School of Social Work  
PhD, University of Tennessee, 1993

Lauren M Greenberg, Lecturer  
School of Social Work  
MSSW, Boston University, 2001

Roberta R Greene, Professor  
Louis and Ann Wolens Centennial Chair in Gerontology  
School of Social Work  
PhD, University of Maryland College Park, 1980

Susan C Harnden, Lecturer  
School of Social Work  
MSW, Washington University in St Louis, 1985

Pamela Haynes, Lecturer  
School of Social Work  
MSW, University of Georgia, 1971

Wilbert J Heffernan, Professor Emeritus  
School of Social Work  
PhD, University of North Carolina at Chapel Hill, 1964

George K Herbert, Professor Emeritus  
School of Social Work  
PhD, Tulane University, 1970

Lynn M Hoare, Lecturer  
School of Social Work

MFA, University of Texas at Austin, 1998

Lori K Holleran, Associate Professor  
School of Social Work  
PhD, Arizona State University Main, 2000

Catherine Hough, Clinical Assistant Professor  
School of Social Work  
MSSW, University of Texas at Austin, 1993

Elizabeth Kay Hurley, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2005

Yuri Jang, Associate Professor  
School of Social Work  
PhD, University of South Florida, 2001

Gregory V Jensen, Lecturer  
School of Social Work  
MSW, University of Iowa, 1982

Allyson M Jervy, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 1997

Christine M Johnson, Lecturer  
School of Social Work  
MSW, Texas State University-San Marcos, 2003

Barbara L Jones, Associate Professor  
School of Social Work  
PhD, State University of New York at Albany, 2004

Laura G Jones-Swann, Lecturer  
School of Social Work  
EdM, Texas Tech University, 1983

Kendra L Jorgensen-Wagers, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2008

Dina Marie Kassler, Lecturer  
School of Social Work  
PhD, The University of Memphis, 1997

Kristen G Kimbell, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2011

Jane A Kretzschmar, Clinical Professor  
School of Social Work  
MSW, University of Michigan-Ann Arbor, 1979

Rebecca R Kunkel, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 1993

Sarah E Kyle, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 1998

Noel G Landuyt, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1999

Michael L Lauderdale, Professor  
Clara Pope Willoughby Centennial Professorship in Criminal Justice

School of Social Work  
PhD, University of Oklahoma Norman Campus, 1967

Laura Lein, Professor Emeritus  
School of Social Work  
PhD, Harvard University, 1973

Carol M Lewis, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1995

Tamera B Linseisen, Clinical Associate Professor  
School of Social Work  
MSSW, University of Texas at Austin, 1989

Molly A Lopez, Research Associate Professor (Affiliated)  
School of Social Work  
PhD, Texas A & M University, 1998

John Chang Luk, Lecturer  
School of Social Work  
MD, Drexel University, 1996

Pamela A Malone, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2010

Octavio N Martinez, Clinical Professor  
School of Social Work  
MD, Baylor College of Medicine, 1997

Farnaz Masumian, Lecturer  
School of Social Work  
MA, University of Texas at Austin, 1985

Sarah M McCafferty, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2006

Talia Melanie McCray, Assistant Professor  
School of Social Work  
PhD, University of Michigan-Ann Arbor, 2001

Steve D McKee, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 1978

John McNeil, Professor Emeritus  
School of Social Work  
PhD, University of Southern California, 1964

Ruth G McRoy, Professor Emeritus  
School of Social Work  
School of Social Work  
PhD, University of Texas at Austin, 1981

Kelly S Mikelson, Assistant Professor  
School of Social Work  
PhD, University of Texas at Austin, 2008

Suze L Miller, Lecturer  
School of Social Work  
MSW, University of Texas at Arlington, 1981

Arlene K Montgomery, Lecturer  
School of Social Work  
PhD, Smith College, 1999

Elizabeth Mueller, Associate Professor  
School of Social Work  
PhD, University of California-Berkeley, 1992

Mary K Mulvaney, Clinical Professor  
School of Social Work  
MSSW, University of Texas at Austin, 1980

Forrest Alan Novy, Research Associate Professor (Affiliated)  
School of Social Work  
PhD, Northwestern University, 1981

John S Nowicki, Lecturer  
School of Social Work  
MSW, University of Texas at Arlington, 1979

Elizabeth Ownby, Lecturer  
School of Social Work  
MSW, University of Texas at Arlington, 1990

Vicki Y Packheiser, Clinical Associate Professor  
School of Social Work  
MSW, University of Illinois at Urbana-Champaign, 1980

Yolanda C Padilla, Professor  
School of Social Work  
PhD, University of Michigan-Ann Arbor, 1993

Elizabeth C Pomeroy, Professor  
School of Social Work  
PhD, University of Texas at Austin, 1994

Suzanne Laura Potts, Lecturer  
School of Social Work  
MSW, San Diego State University, 1998

Stephanie L Rivaux, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 2009

Michele Angela Rountree, Associate Professor  
School of Social Work  
PhD, Arizona State University Main, 1992

Allen Rubin, Professor  
Bert Kruger Smith Centennial Professorship in Social Work  
School of Social Work  
PhD, University of Pittsburgh, Pittsburgh Campus, 1976

Ruth J Rubio, Clinical Professor  
School of Social Work  
MSSW, University of Texas at Austin, 1974

Sophia P Sarantakos, Lecturer  
School of Social Work  
MSW, Tulane University, 2006

Arthur J Schwab, Professor  
Clara Pope Willoughby Centennial Professorship in Child Welfare  
School of Social Work  
PhD, University of Texas at Austin, 1981

Penelope C Seay, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1993

Clayton T Shorkey, Professor

Josleen and Frances Lockhart Memorial Professorship for Direct Practice in Social Work  
School of Social Work  
PhD, University of Michigan-Ann Arbor, 1968

Guy E Shuttlesworth, Professor Emeritus  
School of Social Work  
PhD, University of Pittsburgh, Pittsburgh Campus, 1970

Laura Elmore Smith, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2001

Robin M Smith, Clinical Assistant Professor  
School of Social Work  
MSSW, University of Texas at Austin, 1992

Russell A Smith, Lecturer  
School of Social Work  
MSW, University of Houston, 1997

Brook M Son, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2004

Julia Ann Speir, Lecturer  
School of Social Work  
MSW, Texas State University-San Marcos, 2000

Richard T Spence, Research Professor (Affiliated)  
School of Social Work  
PhD, University of Texas at Austin, 1984

David W Springer, Professor  
School of Social Work  
PhD, Florida State University, 1997

Calvin L Streeter, Professor  
Meadows Foundation Centennial Professorship in the Quality of Life in the Rural Environment  
School of Social Work  
PhD, Washington University in St Louis, 1989

Mitchell Sudolsky, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 1978

Sarah A Swords, Clinical Assistant Professor  
School of Social Work  
MSW, Simmons College, 1982

Sanna Thompson, Associate Professor  
School of Social Work  
PhD, Washington University in St Louis, 1998

Dnika J Travis, Assistant Professor  
School of Social Work  
PhD, University of Southern California, 2006

Mary M Velasquez, Professor  
School of Social Work  
PhD, University of Texas Health Science Center at Houston, 1997

Kirk L Von Sternberg, Associate Professor  
School of Social Work  
PhD, University of Texas Health Science Center at Houston, 2005

Tanya M Voss, Clinical Associate Professor

School of Social Work  
MSW, University of Texas at Austin, 1996

Susan Leah Walsh, Lecturer  
School of Social Work  
MSSW, University of Texas at Arlington, 1992

Deborah K Webb, Lecturer  
School of Social Work  
PhD, University of Texas at Austin, 1994

Shane O Whalley, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 2003

Barbara W White, Professor  
Centennial Professorship in Leadership for Community, Professional, and Corporate Excellence  
School of Social Work  
PhD, Florida State University, 1986

Martha S Williams, Professor Emeritus  
School of Social Work  
PhD, University of Texas at Austin, 1963

Christine D Winston, Lecturer  
School of Social Work  
MSSW, University of Texas at Austin, 1998

Luis H Zayas, Professor  
Centennial Professorship in Leadership for Community, Professional, and Corporate Excellence  
School of Social Work  
PhD, Columbia University in the City of New York, 1986

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