

Engineering

Cockrell School of Engineering

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Mission

The mission of the Cockrell School of Engineering is to develop engineering leaders who identify and solve challenging problems through engineering education, research, and 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 Jackson School of Geosciences, since 1996; and undergraduate degrees in biomedical engineering beginning in 2002. A degree in engineering science was offered from 1960 until 1988.

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 can submit either the Common App or ApplyTexas application through the University by December 1, completing the scholarship section and marking engineering as their first-choice major. Additionally, students should acknowledge the Engineering Honors

Program question with their interest on the admission application, also due by December 1.

Current engineering students should complete the online engineering scholarship application by April 1 each year. Continuing students should complete the Engineering Scholarship Application which opens in LASSO from April 1 – May 1 each year. Information for scholarship recipients and links to additional scholarship resources is available [online](#).

Student Services

Engineering Student Services

The Engineering Student Services (ESS) division consists of: Academic Advising, the Engineering Career Assistance Center (ECAC), and the Engineering Student Success Center (ESSC). ESS provides a transformative, engaging, and personalized education experience which prepares our students to become socially responsible, courageous engineers. The office aims to accomplish this mission by delivering the highest quality experience for students from the time of their initial exploration through their successful graduation from the Cockrell School

Career Services

The Engineering Career Assistance Center (ECAC) helps engineering students with job search and career planning through counseling, workshops, and campus recruiting and interviews. Engineering students should register with 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 career counseling sessions and workshops include career planning and exploration, résumé writing, interviews, site visits, and evaluating job offers.

ECAC hosts interviews in its 27 interview rooms throughout the fall and spring recruiting seasons. Employers seek graduating students, co-op students, and summer interns in all engineering disciplines.

ECAC encourages engineering students to visit our office in person in the Engineering Education and Research Center (EER). Engineering students can also visit ECAC [online](#) and reach out via [e-mail](mailto:ecac@engr.utexas.edu) (ecac@engr.utexas.edu) or phone at (512) 471-1915.

Engineering Student Success Center

The Engineering Student Success Center (ESSC) provides a welcoming space for students to develop the skills and confidence needed to achieve their academic and personal goals. ESSC encourages growth and achievement while enriching students' academic experiences and personal development through focused programming facilitated by the Equal Opportunity in Engineering (EOE) program, the Women in Engineering Program (WEP) and the programs and student organizations coordinated by Engineering Student Life (ESL). As students begin their journey with engineering, ESSC programs provide a solid foundation for academic success and support students during the first semesters. As students move closer to degree completion, their involvement in ESSC leadership programs, industry recruiting events and meaningful service opportunities prepare them to take their place as thoughtful and effective leaders.

Advising

Academic Advising

There are several offices within the school that work together to provide the engineering students with academic advising services. The ESS Advising staff strive to build a strong foundation for academic and

professional success for all engineering students, through personalized and responsive guidance throughout the four-year college experience.

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. 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.

The Assistant Dean for ESS and the ESS Academic Advisors represent the dean in all student matters. In addition, the ESS advisors help students, staff, and faculty navigate the policies and procedures of the Cockrell School and the University. Students may seek assistance in person in the Engineering Education and Research Center (EER), by phone at (512) 471-4321, or by [e-mail](mailto:studentservices@engr.utexas.edu) (studentservices@engr.utexas.edu). Engineering Student Services also provides information [online](#).

Counseling and Referral Services

University counseling services are available from the Counseling and Mental Health Center, the Telephone Counseling Service and University Health Services. These offices are described in [General Information Catalog](#).

Counselors in Academic Residence Program (CARE)

CARE is a program of the Counseling and Mental Health Center, which provides a licensed mental health professional to work with students who have been referred by faculty and staff. CARE counselors integrate in the college and provide support and consultation on mental health issues for advisors, faculty and dean's staff. The Engineering CARE counselor is located in the Engineering Student Services Office.

Student Organizations and Programs

Engineering Student Life

The Engineering Student Life (ESL) program supports current Texas Engineering undergraduate and graduate students by providing opportunities for students to build community and develop transformative leadership skills. In addition to supporting the Cockrell School's 80+ engineering student organizations, ESL programs provide students with experiences that develop confidence and skills in leadership, teamwork and communications. Additional information about Engineering Student Life and engineering student organizations is available in person in the Engineering Education and Research Center (EER), [online](#), by phone at (512) 232-5778, and by [e-mail](mailto:studentlife@engr.utexas.edu) (studentlife@engr.utexas.edu).

Ramshorn Scholars Program

The Ramshorn Scholars Program (RSP) is an engineering academic learning community designed to facilitate student success in engineering and at UT Austin. As a part of the Ramshorn Scholars Program, student status as an engineer-in-training is kept front and center through interactive programming and specialized resources.

RSP aims to create a community that promotes and helps students achieve academic excellence. In fact, the Ramshorn is a symbol with deep roots in the Cockrell School that has defined academic achievements for our student engineers for decades.

Additional information about RSP is available in person in the Engineering Education and Research Center (EER), [online](#), by phone at (512) 471-4321, and by [e-mail \(ramshornscholars@engr.utexas.edu\)](mailto:ramshornscholars@engr.utexas.edu).

Equal Opportunity in Engineering Program

Established in 1970 by Texas Engineering, the Equal Opportunity in Engineering Program (EOE) promotes the recruitment and academic development of students within Cockrell. Participants in EOE can expect to build their leadership, communication and team-building skills through real-world experiences and connections to leaders in industry and academia. All Texas Engineering students are invited to join EOE's vibrant community and peer support network.

Additional information about the EOE Program is available in person in the Engineering Education and Research Center (EER), [online](#), by phone at (512) 471-5953, and by [e-mail \(eeo@engr.utexas.edu\)](mailto:eeo@engr.utexas.edu).

Women in Engineering Program

Established in 1991, the Women in Engineering Program (WEP) connects students to the world of engineering through recruitment initiatives and programs. WEP participants are members of a supportive structure which enhances connections to the Cockrell School. WEP events and activities highlight opportunities for community and support while forming the basis for lifelong skills and friendships.

Additional information is available in person in the Engineering Education and Research Center (EER), [online](#); by phone at (512) 471-5650; and by [e-mail \(wep@engr.utexas.edu\)](mailto:wep@engr.utexas.edu).

Additional Support and Opportunities

Study Abroad

International Engineering Education offers programs designed for Longhorn Engineers to study abroad. Participants may apply their scholarships and financial aid loans to all necessary costs, including tuition and fees, required travel, insurance and living expenses. Most programs do not have any foreign language requirements so students may take engineering courses while also exploring global innovation, entrepreneurship, and service through immersion in industry, laboratories and communities abroad.

As one of the best engineering schools in the country, the school prides itself in providing international engineering education opportunities to prepare its students to become global leaders and innovators. Engineers lead the world in developing and managing high technologies and companies that improve and affect our daily quality of life, health, security, education, economy, and world peace.

The school offers a variety of programs for all majors and class levels so that every interested student can find an opportunity. Students may study abroad as early as the end of their first year.

All engineering students are highly encouraged to participate in at least one global learning experience. The International Engineering Education office holds frequent information session sessions and one-on-one advising to help students plan how to globalize their education and select a program that best suits their interests. For more information, please visit us [online](#).

Requirements and Policy

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.

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 related to grade point average impact academic warning programs and dismissal procedures, internal transfer (change of major), admission to the Engineering Honors Program, eligibility for graduation, and eligibility for graduation with University Honors.

Enrollment Status (Quantity of Work Rule)

All undergraduates follow University's Enrollment Status (Quantity of Work Rule) as published in the [General Information Catalog](#).

Maximum Number of Hours in the Fall or Spring for Engineering

"Coursework" includes correspondence, extension, distance education, 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 17 in-residence semester hours of coursework without an approved application made [online](#).
2. No student may register for more than 21 in-residence semester hours of coursework during any fall or spring semester.

Rules for the Summer Semester

For more information about summer, see the [General Information Catalog](#). These limits apply whether the courses are taken at the University or another institution.

Repetition of a Course

An undergraduate in the school may not enroll in any lower-division courses in engineering, geology or natural sciences 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 Engineering Student Services. This policy is designed to maximize student success and minimize time to graduation. Students are encouraged to speak with their engineering academic advisor before making decisions regarding Q drops or withdrawals.

To request permission to enroll in a course for a third and final attempt a student must submit a written appeal [online](#). A student may receive departmental advisor and Engineering Student Services advising approval to enroll in a course a third and final attempt if the student has a substantiated nonacademic reason for not successfully completing the course in earlier attempts. Documentation may be required to support the substantiated nonacademic reason. A third and final attempt is firm, regardless of new or ongoing nonacademic circumstances that occur during the semester or term. If the student is denied approval to enroll in a required course, the student will be placed in the undeclared major code and must consider other eligible 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 school may not repeat for a letter grade a course in which they earned a grade of C- or better. 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 school. The official grade in a course is the last one assigned.

Simultaneous Majors

An engineering student may pursue two majors simultaneously. The simultaneous major option is available only to undergraduates who have been admitted to both degree programs. The student must follow all procedures and meet all requirements associated with both majors. A student admitted to engineering may not pursue two engineering majors and may not receive more than one bachelor's degree in engineering.

The simultaneous major option is available only to undergraduates who have been admitted to both degree programs.

Liberal Education of Engineers

Engineering graduates will be aware of their social responsibilities and the effects of technology on society through the curriculum.

With the appropriate selection of courses, the University's Core Curriculum and ABET general education requirements can be satisfied simultaneously. Core Curriculum hours may be satisfied simultaneously for hours in a potential minor and certificate program.

Foreign Language Requirement

See the [General Education Requirements](#) section in this catalog for more information.

Applicability of Certain Courses

Physical Activity Courses

Physical activity (PED) courses and KIN 106C are offered by kinesiology and health. They may not be counted toward a degree in engineering. However, they are counted as hours for which the student is enrolled, and the grades are included in the University grade point average.

ROTC Courses

While the department advisor may suggest a course, Engineering Student Services holds the authority to replace a prescribed engineering course with an equivalent air force science, military science, or naval science course, up to a limit of 12 semester credit hours, provided the course is not part of the Core Curriculum.

Correspondence and Extension Courses

Credit that a University student in residence earns simultaneously by The University of Texas at Austin correspondence/extension or elsewhere or through distance education at another school will not be counted toward an engineering degree unless specifically approved in advance by Engineering Student Services. Application for this approval should be made online or at the Engineering Student Services Office, located in the Engineering Education and Research Center (EER). No more than 20 hours required for any engineering degree may be taken by correspondence and extension.

Concurrent Enrollment

Concurrent enrollment occurs when a student is enrolled at two or more separate institutions simultaneously. Prior written approval from Engineering Student Services is required to assure a course taken at another institution while the student is concurrently registered at the University will count toward the student's degree. Concurrent enrollment applications are required to be submitted and approved prior to the 12th

class day in a long semester and 4th class day in a summer term. The engineering concurrent enrollment application is available [online](#).

Once the course(s) is successfully completed, an official transcript must be posted to the UT Austin academic record by the deadline given in the official academic calendar. Please contact the Engineering Student Services Office, located in the Engineering Education and Research Center (EER), or by phone for further questions.

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

All degree programs in the school have specific expectations regarding portable computing devices. For more information, please see the catalog sections for these programs.

Academic Standards

In addition to the scholastic standards described in the [General Information Catalog](#), the school also monitors academic standards. Students who fail to meet the standards stated in the *General Information Catalog* are placed on "academic warning" by the University. The warning status is given to those who fall below 2.0 UT cumulative, major, and technical grade point averages. In cases with extenuating circumstances, the student may appeal to Engineering Student Services (ESS) Advising.

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 their status with an academic advisor in the Engineering Student Services Office. Call (512) 471-4321 to set up an appointment with an academic advisor.

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 or if it meets the requirements for the school's semester exchange grading policy for study abroad. 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 30 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 [online](#).

For information on how to receive credit by examination, see the [General Information Catalog](#).

Grade Policy for Semester Exchange (Study Abroad) Students

With permission of the undergraduate advisor in their department, engineering students may elect to place up to four exchange courses on their records with a *CR*, rather than a University of Texas at Austin letter grade. The following restrictions apply:

1. Only courses completed on a semester exchange at a Cockrell School of Engineering partner institution qualify.
2. Students must choose the Pass/Fail option by the usual University mid-semester deadline given in the academic calendar and must have prior permission of their undergraduate advisor before doing so. If the exchange university does not follow the same academic calendar at The University of Texas at Austin, the student must make this request before 60 percent of the course completion (usually about nine weeks from the start of class).
3. The corresponding course in The University of Texas at Austin degree plan will determine the minimum grade requirement to obtain the *CR* grade (i.e., if the University course required a *C-* or better, the student must have earned the equivalent of *C-* or better on the exchange course to receive a *CR*; in the absence of a specified minimum grade requirement, the standard is an equivalent of *D-* or better).
4. Courses in the engineering degree program taken on exchange programs with the *CR* grade option may be counted toward any requirements for the degree except courses being applied toward the 42 hour, University Core Curriculum requirements.
5. No matter how many exchange courses a student takes, no more than two exchange courses per semester and no more than four total exchange courses with the *CR* grade can be applied toward the degree.
6. Once a course is placed on The University of Texas at Austin record, the grade designation may not be changed.

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 advisor 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. 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

Students who are interested in dentistry can obtain specific information from the University's Health Professions Office.

Law School

Students interested in admission to the law school of the University should consult the [Law School Catalog](#). Students interested in pursuing law school outside of the University may utilize pre-law services of the Liberal Arts Career Service Center. In addition, the Engineering Career Assistance Center (ECAC) provides pre-law advising.

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.

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. Students interested in pursuing a graduate business program outside of the University may utilize the Engineering Career Assistance Center (ECAC) for career advising.

Graduation

[University Graduation requirements](#) for undergraduates are published in this catalog.

Special Requirements of the School

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 [online](#).

All individual engineering degree programs must include at least 48 semester hours of engineering coursework.

Residence Rules

In the Cockrell School, 30 in-residence 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 24 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 Engineering Student Services Office, located in the Engineering Education and Research Center (EER).

Degree Audit

Each student should review his or her degree 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. 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 these requirements; see the rules on [graduation under a particular catalog](#). Since the student is responsible for correct registration toward completion of the degree program, he or she should first check the requirements with their department Undergraduate Advising Office and then seek an official ruling in the Engineering Student Services Office 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. A student is eligible to graduate if their engineering degree audit is 100% complete. If a student fails to submit an application for degree by the deadline given in the academic calendar, an application for degree may be submitted by their academic Dean or designee. An application submitted under these circumstances cannot be canceled without a successful appeal to Undergraduate Studies (Student Success Help Desk). Please refer to the [Graduation Appeal Application](#) for further information.

Please contact the Engineering Student Services Office for further questions.

Nonresidence Coursework

Concurrent enrollment occurs when a student is enrolled at two or more separate institutions simultaneously. Prior written approval from Engineering Student Services is required to assure a course taken at another institution while the student is concurrently registered at the University will count toward the student's degree. Concurrent enrollment applications are required to be submitted and approved prior to the 12th class day in a long semester and 4th class day in a summer term. The Engineering concurrent enrollment application is available [online](#).

Once the course(s) is successfully completed, an official transcript must be posted to the UT Austin academic record by the deadline given in the official academic calendar. Please contact the Engineering Student Services Office for further questions.

Second Degrees

A student who has successfully completed a UT Austin degree and later wishes to be readmitted to potentially complete a second degree in engineering, must contact Engineering Student Services (ESS) Advising for information regarding an application process and receive approval to apply. This separate application process requires the successful completion of M 408D or M 408M; PHY 303K and PHY 103M or PHY 105M with letter grades of B or higher. Additionally, applicants must have achieved a UT Austin cumulative GPA of 3.0 or higher, and letter grades of B or higher in all technical coursework (engineering, math, science) applicable to the specific engineering degree they are seeking. A minimum 3.0 GPA is required to apply but does not guarantee admission as all engineering disciplines are competitive. A student admitted to engineering may not pursue two engineering majors and may not receive more than one bachelor's degree in engineering.

Commencement

In addition to the University commencement ceremony held each spring, the Cockrell School holds an undergraduate commencement ceremony in May. Degree candidates intending to graduate in the current academic year and who have applied and are approved to participate are eligible to attend the May commencement ceremony. Information about graduation and commencement is available [online](#).

Accreditation

All University curricula leading to bachelor's degrees in engineering are accredited by the [Engineering Accreditation Commission of ABET](#). 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.

ABET Criteria

The Engineering Accreditation Commission of ABET curriculum requirements specify subject areas appropriate to engineering but do not prescribe specific courses. The program curriculum must provide adequate content for each area, consistent with the student outcomes and program educational objectives, to ensure that students are prepared to enter the practice of engineering. The curriculum must include:

1. a minimum of 30 semester credit hours (or equivalent) of a combination of college-level mathematics and basic sciences with experimental experience appropriate to the program
2. a minimum of 45 semester credit hours (or equivalent) of engineering topics appropriate to the program, consisting of engineering and computer sciences and engineering design, and utilizing modern engineering tools
3. a broad education component that complements the technical content of the curriculum and is consistent with the program educational objectives
4. a culminating major engineering design experience that 1) incorporates appropriate engineering standards and multiple constraints, and 2) is based on the knowledge and skills acquired in earlier course work

Licensure

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." The school offers the FE Exam Prep: [Fundamentals in Engineering course](#) to prepare for the FE exam.

For additional information, contact the Texas Board of Professional Engineers or the equivalent agency in another state.

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. Students

complete career developments and a technical report during the course(s) (E S 225K, E S 225L, E S 125N).

To realize the full academic and professional value of the Co-op Program, students complete either two or three semesters with the same employer in a cooperative engineering position. Students receive two hours of letter-grade credit for a spring or fall semester work term and one hour for a summer term. Students should apply for the Co-op Program at least one semester before planning to begin a co-op work term. Students must enroll in the Co-op course(s) during the same semester of the Co-op work experience. Retroactive credit for Co-ops will not be granted under any circumstances. The only hours/weeks of Co-op employment applicable to the E S course(s) occur between the semester start and end dates.

Students may apply for the first work term if they meet all the following:

- Be a currently enrolled engineering undergraduate student
- Must have completed one-long semester in-residence at UT Austin
- Have a minimum 2.5 overall in-residence GPA and a 2.0 major in-residence GPA
- Must have at least 6 credit hours of degree coursework left after the final Co-op course (E S 225K, E S 225L, E S 125N)
- Must have approval from the Engineering Career Assistance Center Co-op Program Coordinator to be registered for the Co-op course(s)

Engineering students can visit the Co-op Program in the Engineering Career Assistance Center or [online](#). Engineering students can reach the Co-op Program via [e-mail \(co-op@engr.utexas.edu\)](mailto:co-op@engr.utexas.edu) or by phone at (512) 471-5954.

UTeach-Engineering

UTeach-Engineering is an innovative program that prepares engineering students to teach mathematics, physical science, and engineering to students in grades eight through twelve. The program, a collaboration between the engineering, natural sciences, 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 program invites students to explore their interest in teaching as early as the freshman year. Key features of the program include field experience, mentorship, seminar instruction, cohort support and innovative use of technology. Students gain experience in public school classrooms as they teach progressively longer lessons under 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.

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 the [General Information Catalog](#).

Information is available from The University of Texas at Austin, Engineering Education and Research Center (EER) and by phone at (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 [online](#).

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 [online](#).

Applicants to the Cockrell School may submit the Common App or ApplyTexas applications 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, and choose a second major that aligns with their interests.

Transfer Admission

Internal Transfer

Internal transfer describes the process of a currently enrolled undergraduate student at The University of Texas at Austin moving from one college to another or moving within the Cockrell School from one major to another. Students must apply for internal transfer into Cockrell School majors through an online application. Admission is competitive and based on space availability. Students must meet ALL of the requirements below to be considered for transfer into a major in the Cockrell School of Engineering. Coursework and GPA for the semester in which a student applies for a change of major will be included in the transfer application. The University of Texas at Austin degree holders seeking a second degree in engineering should contact Engineering Student Services for information on a separate application process.

Requirements and Application Deadlines

All applicants will be required to submit a short 500-word essay, utilizing the listed guidance in the Cockrell School's [Change of Major/Internal Transfer](#) website. Conditions for accepting a new engineering major (or adding an engineering major as a second major) are also listed on the [Change of Major/Internal Transfer](#) website. If admission to a new engineering major is accepted, a student is ineligible to apply to internally transfer to a different engineering major for two long semesters. After two long semesters, if the student meets all internal transfer requirements, they will be eligible to apply. This cannot be appealed.

First-Semester Engineering Students

- Proposed semester for transfer: spring
- Current college of enrollment: Cockrell School of Engineering
- Required in-residence credit hours completed: 12 hours minimum (credit by exam, UT Correspondence, UT Extension, and transfer hours from another university are not counted)
- Minimum cumulative in-residence GPA 3:0
- Minimum GPA in all required technical courses for proposed major: 3:0
- Credit for M 408C (or math course beyond M 408C) in residence; a minimum of one other in-residence technical course toward your proposed major. Technical courses include math, science, and departmental courses for proposed engineering major. Please refer to program pages for in-residence technical course options within each degree major program. For additional information, see the [Change of Major/Internal Transfer website](#).
- Application deadline: December 1 (application opens September 15)

Continuing Engineering Students

- Proposed semester for transfer: fall, or spring
- Current college of enrollment: Cockrell School of Engineering
- Required in-residence credit hours completed: 24 hours minimum (credit by exam, UT Correspondence, UT Extension, and transfer hours from another university are not counted)
- Minimum cumulative in-residence GPA 3:0

- Minimum GPA in all required technical courses for proposed major 3.0
- Credit for M 408D or M 408M; PHY 303K and PHY 103M or PHY 105M; a minimum of four in-residence technical courses toward the proposed major. Technical courses include math, science, and departmental courses for a proposed engineering major. Please refer to program pages for in-residence technical course options within each degree major program. For additional information, see the [Change of Major/Internal Transfer website](#).
- Semesters completed at UT Austin before transfer: Four long semesters (falls/spring) or less
- Maximum in-residence credit hours completed: 24 hours minimum and 60 hours maximum (credit by exam, UT Correspondence, UT Extension and transfer hours from another university are not counted)
- Application deadline: December 1 for spring transfer (application opens September 15) or May 1 for fall transfer (application opens February 1)

All Other UT Austin Students

- Proposed semester for transfer: fall
- Current college of enrollment: Any UT Austin college except the Cockrell School of Engineering
- Semesters completed at UT Austin before transfer: four long semesters (fall/spring) or less
- Required in-residence credit hours completed: 24 hours minimum and 60 hours maximum (credit by exam, UT Correspondence, UT Extension, and transfer hours from another university are not counted)
- Minimum cumulative in-residence GPA: 3.0
- Minimum GPA in all required technical courses for proposed major 3.0
- Credit for M 408D or M 408M; PHY 303K and PHY 103M or PHY 105M; a minimum of four in-residence technical courses toward the proposed major. Technical courses include math, science, and departmental courses for a proposed engineering major. Please refer to program pages for in-residence technical course options within each degree major program. For additional information, see the [Change of Major/Internal Transfer website](#).
- No more than one previous attempt to transfer into the Cockrell School of Engineering is permitted. Third applications are not allowed. An application for two different engineering majors in the same semester counts as one single attempt.
- Application deadline: May 1 (application opens February 1)

External Transfer

External transfer applicants will be required to meet the following minimum criteria to be considered for admission to an engineering major:

- Transfer credit for M 408L, M 408M, or M 408D
- Transfer credit for PHY 303K and PHY 103M or PHY 105M
- Transfer credit for at least four technical courses, including the mathematics and physics coursework listed above. Technical courses include courses offered in math, physics, chemistry, biology, geology, computer science, or engineering.

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 the [General Information Catalog](#). 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 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 in residence at the University.

Registration

The General Information Catalog 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, includes registration instructions, advising locations, and the times, places, and instructors of classes.

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.

Honors

University Honors

The designation University Honors, awarded at the end of each fall or spring 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 the [General Information Catalog](#).

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 the [General Information Catalog](#).

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, and honors housing.

When submitting an admission application to the University through the Common App or ApplyTexas application, incoming first-year students should mark engineering as their first-choice major and indicate their intent to apply for honors by checking the box with your interest in Engineering Honors Merit Based Scholarship. Both the admission application and the EHP indication are due December 1.

The Cockrell School also sends current students invitations to apply for the EHP after they complete 24 hours in residence and rank in the top 10 percent of their class and major. Eligible students must have at least 60 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 and summer 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 [online](#).

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 of Engineering, the University, and the community.

Honor societies are also an important part of the Cockrell School student community. Honor societies admit students who have established outstanding scholastic records and have demonstrated desirable character and leadership traits. The engineering honor societies are Beta Mu Epsilon (biomedical engineering); Chi Epsilon (civil engineering); Eta Kappa Nu (electrical and computer engineering); Omega Chi Epsilon (chemical engineering); Phi Alpha Epsilon (architectural engineering); Pi Epsilon Tau (petroleum and geosystems engineering); Pi Tau Sigma (mechanical engineering); and Sigma Gamma Tau (aerospace engineering); Tau Beta Pi selects top students from all engineering disciplines.

Engineering student organizations and honor societies are overseen by Engineering Student Life. A complete list of engineering societies is available [online](#).

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 of Science 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. For questions specific to Plan II admissions, please visit the [Plan II Honors Program website](#).

Facilities

The Cockrell School occupies 2,300,000 square feet for classrooms, laboratories, and offices. Seven buildings on the central campus total 1,831,000 square feet. The J. J. Pickle Research Campus supports 495,000 square feet, including the Nuclear Engineering Teaching Laboratory and a substantial number of other engineering research laboratories. The J. J. Pickle Research Campus, about six miles north of the main campus.

Research Organizations

Faculty members and students of the Cockrell School of Engineering may participate in a wide variety of research projects conducted in departments and research centers. The research is supported by federal, state, and industrial research contracts and grants that provide part-

time employment for selected undergraduate and graduate students. More than 1,200 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 centers currently operating within the Cockrell School are: Center for Additive Manufacturing and Design Innovation; Center for Aeromechanics Research; Center for Electromechanics; Center for Energy and Environmental Resources; Center for Energy and Environmental Systems Analysis; Subsurface Energy and Environment; Center for Transportation Research; Center for Water and the Environment; Construction Industry Institute; Microelectronics Research Center; Nanomanufacturing Systems for Mobile Computing and Mobile Energy Technologies; Nuclear Engineering Teaching Laboratory; Texas Materials Institute; and the Wireless Networking and Communications Group.

The Nuclear Engineering Teaching Laboratory is an academic unit of the Cockrell School. Affiliated Research Units are: Applied Research Laboratories, Center for Perceptual Systems, Institute for Cellular and Molecular Biology, the Oden Institute for Computational Engineering and Sciences, and The Energy Institute.

Libraries

For more than 125 years, The University of Texas Libraries have been committed to building one of the greatest library collections in the world. Maintaining more than 10 million volumes and providing access to the latest digital journals, databases, and web resources, our libraries collect and preserve the finest achievements of human knowledge in support of not only research and instruction needs, but also the exploration of deep intellectual curiosities. Assistance with finding and using library resources is offered in person, by contacting individual members of the library staff, and through Ask a Librarian services. More information about UT Libraries is [online](#).

Engineering Development Office

The Cockrell School of Engineering Development and Alumni Relations team is committed to acquiring generous philanthropic investments from individuals, foundations and corporations to develop programs of excellence as well as support students. This philanthropy drives academic and leadership programs for students, scholarships for undergraduates, graduate fellowships, 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 and seven departments through the annual giving programs, the establishment of endowments, estate planning, and the fostering of long-lasting relationships with alumni, friends, and corporate partners.