

Mathematics, Standard (BA)

Total Hours Required: 120

Plan of Study

The Plan of Study is a suggested four-year course sequence to support academic planning and serves as a helpful guide. Currently enrolled students should meet with their academic advisor to tailor their course selections and timelines to their individual goals and circumstances.

Course	Title	Hours
Year 1		
Semester 1		
M 408N	Differential Calculus for Science	4
<u>First-Year Signature Course (090)</u>		3
RHE 306	Rhetoric and Writing	3
<u>Foreign Language and Culture</u>		5
Hours		15
Semester 2		
M 408S	Integral Calculus for Science	4
<u>Visual and Performing Arts (050)</u>		3
<u>Social and Behavioral Sciences (080)</u>		3
<u>Foreign Language and Culture</u>		5
Hours		15
Year 2		
Semester 1		
M 325K	Discrete Mathematics	3
<u>Natural Science and Technology, Part I (030)</u>		3
<u>U.S. History (060)</u>		3
<u>Foreign Language and Culture</u>		3
M 333L	Structure of Modern Geometry	3
Hours		15
Semester 2		
M 341	Linear Algebra and Matrix Theory	3
<u>Natural Science and Technology, Part I (030)</u>		3
<u>U.S. History (060)</u>		3
<u>Foreign Language and Culture</u>		3
C S 349	Contemporary Issues in Computer Science	3
Hours		15
Year 3		
Semester 1		
M 362K	Probability I	3
<u>Natural Science and Technology, Part II (093)</u>		3
GOV 310L	American and Texas Government	3
<u>Cultural Expression, Human Experience, and Thought (may not also be counted toward Core Curriculum)</u>		3
Free Elective		3
Hours		15
Semester 2		
Hours chosen from: Upper-division Math		3
Hours chosen from: Upper-division Math		3
GOV 312L	Issues and Policies in American Government	3
Hours chosen from: Upper-division Elective		3
Free Elective		3
Hours		15
Year 4		
Semester 1		
M 361K	Introduction to Real Analysis	3
Additional Social Science course		3
Hours chosen from: Upper-division Elective		3
<u>Humanities (040)</u>		3

Free Elective	3
Hours	15
Semester 2	
Hours chosen from: Upper-division Math	3
Hours chosen from: Upper-division Math	3
Hours chosen from: Upper-division Elective	3
Hours chosen from: Upper-division Elective	3
Free Elective	3
Hours	15
Total Hours	120

Requirements

All requirements are listed below, starting with the most specialized moving to the most general. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy [General Education](#) requirements, including [Core Curriculum](#).

Code	Title	Hours
Major		
Choose a sequence below:		8
Sequence 1:		
M 408C	Differential and Integral Calculus (Mathematics 408N and Mathematics 408C, or Mathematics 408K and Mathematics 408L, may substitute for Mathematics 408C)	
M 408D	Sequences, Series, and Multivariable Calculus	
Sequence 2:		
M 408N	Differential Calculus for Science	
M 408S	Integral Calculus for Science	
Sequence 3:		
M 408K	Differential Calculus	
M 408L	Integral Calculus	
M 340L	Matrices and Matrix Calculations	3
or M 341	Linear Algebra and Matrix Theory	
M 325K	Discrete Mathematics	3
or M 328K	Introduction to Number Theory	
or M 343K	Introduction to Algebraic Structures	
or M 373K	Algebraic Structures I	
M 361K	Introduction to Real Analysis	3
or M 365C	Real Analysis I	
M 362K	Probability I	3
Hours chosen from:		3
M 333L	Structure of Modern Geometry	
M 339J	Probability Models with Actuarial Applications	
M 339U	Actuarial Contingent Payments I	
M 343L	Applied Number Theory	
M 343M	Error-Correcting Codes	
M 344K	Intermediate Symbolic Logic	
M 348	Scientific Computation in Numerical Analysis	
M 358K	Applied Statistics	
M 361	Theory of Functions of a Complex Variable	
M 367K	Topology I	
M 368K	Numerical Methods for Applications	
M 372K	Partial Differential Equations and Applications	
M 374M	Mathematical Modeling in Science and Engineering	
M 376C	Topics in Methods of Applied Mathematics	

M 378K	Introduction to Mathematical Statistics	
Hours chosen from: Additional upper-division mathematics		9
<i>Subtotal</i>		32
Degree (see details below)		18
Free electives: Additional coursework to reach total hours required.		16
<i>Subtotal</i>		34
General Education		
<u>Core Curriculum</u>		42
<u>Foreign Language other than English, Beginning Proficiency</u>		12
<i>Subtotal</i>		54
<u>College Requirements - Natural Sciences</u>		
<u>General University Requirements</u>		
Total Hours		120

Additional Requirements

Students must earn a grade of at least C- and a University grade point average of at least 2.00 in each required mathematics and science course.

Degree-Bachelor of Arts (BA) - Natural Sciences

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.

Code	Title	Hours
	<u>Foreign Language other than English, Intermediate Proficiency</u>	3
	Select one of the following:	
	Certified proficiency on a placement or credit-by-exam test	
	A passing grade in a language course listed in the College of Liberal Arts section	
	Students who wish to meet the requirement with proficiency in a language not listed in the table found in the College of Liberal Arts section above should contact the Texas Language Center.	
	<u>Additional Social Science (may not also be counted toward Core Curriculum)</u>	3
	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.	
	Mathematics	
	Three semester hours in mathematics, excluding M 301, M 316K, and M 316L	3
	<u>Additional natural sciences hours (may not also be counted toward core curriculum)</u>	6
	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 Bachelor of Arts, Plan I, a student may count (1) no more than 12 hours in mathematics, computer science, and statistics and data sciences combined; and (2) no more than nine hours in any single field of study.	
	Astronomy	

Biology	
Chemistry	
Geological Sciences	
Marine Science	
Nutrition	
Physical science	
Physics	
Mathematics (excluding M 301), computer science, statistics and data sciences	
Other alternative science courses approved by the dean	
Approved alternative courses in history of science and philosophy of science	
<u>Cultural Expression, Human Experience, and Thought (may not also be counted toward Core Curriculum)</u>	3
Total Hours	18

Additional Requirements and Policies

Bachelor of Arts, Plan I Policy

Thirty-six hours must be in upper-division courses. At least 60 hours, including 21 hours of upper-division coursework, must be completed in residence at the University; at least 24 of the last 30 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 16 semester hours of classroom and/or correspondence coursework may be taken on the pass/fail basis; this coursework may be counted only as electives.

Courses in the major and additional coursework 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.

Elective hours Policy

Hours may include no more than 12 semester hours of bible courses; nine hours of designated coursework in air force science, military science, or naval science; 16 hours completed on the pass/fail basis; 39 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 39 hours in any other single college or school of the University.

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 24 but no more than 39 semester hours, with at least 15 hours in upper-division courses. Of these 15 hours, six must be completed in residence. At least 18 hours of coursework in the major, including six hours of upper-division coursework, must be completed in residence at the University.

Additional Coursework

Students in most majors must also fulfill the requirements of additional coursework. The requirements of the additional coursework are established by the major department and are given with the major requirements. Additional restrictions may be imposed by the academic department(s) in which the student takes the courses used to fulfill the requirements of the additional coursework; before planning to use

a course to fulfill the additional coursework requirement, the student should consult the department that offers the course.