

BACHELOR OF SCIENCE (B.S.) MAJOR IN MATHEMATICS

**Minimum required: 120
semester credit hours**

General Requirements

- The general education core curriculum courses are listed in the degree plan below along with the statewide component code number. See the General Education Core Curriculum (<http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum>) section of this catalog for the Texas State requirements and options in the core curriculum, including Honors courses.
- Majors must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- Majors must select a minor from the approved list of Undergraduate Minors (<http://www.mycatalog.txstate.edu/undergraduate/minors>).
- Nine semester credit hours must be writing intensive (WI).
- Students pursuing this B.S. degree program are required to complete an additional 3 hours of English beyond the general education core curriculum. Students may select from the following English courses.

Code	Title	Hours
ENG 2310	British Literature before 1785	3
ENG 2320	British Literature since 1785	3
ENG 2330	World Literature before 1600	3
ENG 2340	World Literature since 1600	3
ENG 2359	US Literature before 1865	3
ENG 2360	US Literature since 1865	3
ENG 3303	Technical Writing	3

- If two years of the same language are taken in high school, then no additional language hours will be required for the degree. In the absence of such high school language, two semesters of the same modern language must be taken at the college level.

Course Requirements

Freshman		
First Semester	Second Semester	
Hours	Hours	
US 1100	1 MATH 2472	4
ENG 1310 (Communication Component Code 010)	3 ENG 1320 (Communication Component Code 010)	3
POSI 2310 (Government/Political Science Component Code 070)	3 HIST 1310 (American History Component Code 060)	3
COMM 1310 (Component Area Option Code 090/091)	3 Life & Physical Sciences Component Code 030	3
MATH 2471 (Mathematics Component Code 020) ¹	4 PHIL 1305 or 1320 (Language, Philosophy & Culture Component Code 040)	3
Social & Behavioral Sciences Component Code 080	3	
17	16	

Sophomore		
First Semester	Second Semester	
Hours	Hours	
MATH 3373	3 MATH 3330	3
Minor	3 Minor	3
Life & Physical Sciences Component Code 030	4 CS 1428	4
Electives	3 ENG Literature (Component Area Option Code 090/094)	3
	MATH 3377	3
13	16	

Junior		
First Semester	Second Semester	
Hours	Hours	
ART 2313, DAN 2313, MU 2313, or TH 2313 (Creative Arts Component Code 050)	3 MATH Advanced Electives	6
MATH 3380	3 Minor	3
Minor	3 POSI 2320 (Government/Political Science Component Code 070)	3
HIST 1320 (American History Component Code 060)	3 Electives	3
Electives	3	
15	15	

Senior		
First Semester	Second Semester	
Hours	Hours	
MATH 4330	3 MATH 4307	3
MATH Advanced Elective	3 MATH 4315	3
Electives	4 Minor	6
ENG 3303 (or ENG Literature)	3 Elective	3
13	15	

Total Hours: 120

¹ Even though MATH 2471 is the first required mathematics course, some students will need to take courses numbered below 2471. Credit examinations in MATH 1315, MATH 2417 and MATH 2471 are available

MATH Advanced Electives

Code	Title	Hours
MATH 3305	Introduction to Probability and Statistics	3
MATH 3323	Differential Equations	3
MATH 3325	Number Systems	3
MATH 3348	Deterministic Operations Research	3
MATH 3383	Numerical Analysis I	3
MATH 3398	Discrete Mathematics II	3
MATH 4305	Probability and Statistics	3
MATH 4306	Fourier Series and Boundary Value Problems	3
MATH 4336	Studies in Applied Mathematics	3
MATH 4337A	Topological Data Analysis	3
MATH 4337B	Research in Discrete Mathematics	3
MATH 4337C	Numerical Methods for Ordinary Differential Equations	3
MATH 4350	Introduction to Combinatorics	3

2 *Bachelor of Science (B.S.) Major in Mathematics*

MATH 4382	The Literature and Modern History of Mathematics and Its Applications	3
MATH 4383	Numerical Analysis II	3