

BACHELOR OF ARTS (B.A.) 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.
- In addition to the general education core curriculum requirements, the Bachelor of Arts degree (<http://mycatalog.txstate.edu/undergraduate/degree-program-information/>) (B.A.) requires three additional hours of English literature, three hours of mathematics, science, logic, or computer science courses, a minor and six hours of 2000-level modern language courses. Most students will have to complete the 1410 and 1420 language courses as prerequisites before attempting the 2310 course.
- Nine hours of writing intensive (WI) courses are required for graduation.
- Students must select a minor from the approved list of Undergraduate Minors (<http://www.mycatalog.txstate.edu/undergraduate/minors/>).
- Students must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- The minimum number of hours required for this degree program is 120. The number of free elective hours a student will complete depends on the number of hours a student may need to achieve the required 120 total or 36 advanced hours.
- Students entering Texas State with fewer than 16 credit hours completed after high school graduation will be required to take US 1100. All others will be exempt from taking this course. Students may be required to earn an additional elective to reach the 120 minimum total credit hour requirement for the awarding of a degree.

Course Requirements

		Freshman	
		First Semester Hours	Second Semester Hours
US 1100		1 MATH 2472 (Component Area Option Code 090 and 092 [TCCN MATH 2414])	4
MATH 2471 (Mathematics Component Code 020 [TCCN 2413]) ¹		4 Communication Component Code 010	3
ENG 1310 (Communication Component Code 010 [TCCN ENGL 1301])		3 American History Component Code 060	3
POSI 2310 (Government/Political Science Component Code 070 [TCCN GOVT 2306])		3 Life and Physical Sciences Component Code 030	3

Social and Behavioral Sciences Component Code 080	3 Language, Philosophy, and Culture Component Code 040	3
14		16

Sophomore		
First Semester Hours		Second Semester Hours
MATH 2393 (TCCN MATH 2315)	3 MATH Advanced Elective	3
MATH 3330	3 CS 1428 (TCCN COSC 1437)	4
Minor	3 Modern Language 1420	4
Modern Language 1410	4 Component Area Option Codes 090	3
Life and Physical Sciences Component Code 030	4	

Junior		
First Semester Hours		Second Semester Hours
MATH 3377	3 MATH 3380	3
Minor	3 MATH Advanced Elective	3
Modern Language 2310	3 Minor	3
American History Component Code 060	3 Modern Language 2320	3
Creative Arts Component Code 050 [HUMA 1315]	3 POSI 2320 (Government/Political Science Component Code 070 [TCCN GOVT 2305])	3

Senior		
First Semester Hours		Second Semester Hours
MATH 4330	3 MATH 4307	3
Minor	6 MATH 4315	3
BA ENG Literature [TCCN ENGL 2322, ENGL 2323, ENGL 2332, ENGL 2333, ENGL 2327, ENGL 2328]	3 Minor	3
Elective	2 MATH Advanced Elective	3
	Elective	3
14		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 4327	Introduction to Complex Analysis and Its Applications	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
MATH 4383	Numerical Analysis II	3
MATH 4393	Introduction to Finite Element Methods	3