Minimum required: 120 semester credit hours

General Requirements

1. 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 (https://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.
2. Students must complete all the required courses and 12 hours of advance MATH/CS electives with at least 6 hours of them from MATH.
3. Nine semester credit hours must be writing intensive (WI).
4. 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.
5. Students entering Texas State with fewer than 16 credit hours completed after high school graduation will be required to take US 1100 (https://mycatalog.txstate.edu/search/?P=US%201100). 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	American History Component Code 060	3
Communication Component Code 010	3	Communication Component Code 010	3
Government Science Component Code 070	3	MATH 2358	3
Social and Behavioral Science Component Code 080	3	Language, Philosophy, and Culture Component Code 040	3
Component Area Option Code 090	3	MATH 2472 (Component Area Option Code 090/092 [TCCN MATH 2414])	4
MATH 2471 (Mathematics Component Code 020 [TCCN MATH 2413])	4		
	17		**16**

Sophomore

First Semester	Hours	Second Semester	Hours
Life and Physical Sciences Component Code 030	3	Government Science Component Code 070	3
American History Component Code 060	3	CS 2308 (TCCN COSC 2336)	3
CS 1428 (TCCN COSC 1437)	4	Life and Physical Sciences Component Code 030	3
MATH 2393 (TCCN MATH 2315)	3	MATH 3305	3
MATH 2328 (TCCN MATH 1342)	3	Advanced MATH/CS Electives	3
	16		**15**

Junior

First Semester	Hours	Second Semester	Hours
Creative Arts Component Code 050 [HUMA 1315]	3	General Electives	3
MATH 3324	3	CS 3354	3
MATH 3376	3	MATH 4305	3
CS 3358	3	MATH 3330	3
Advanced MATH/CS Electives	3	Advanced MATH/CS Electives	3
	15		**15**

Senior

First Semester	Hours	Second Semester	Hours
MATH 3380	3	MATH 4383	3
CS 4347	3	General Electives	3
CS 4379G	3	Advanced MATH/CS Electives	3
MATH 3383	3	General Electives	3
General Electives	2		
	14		**12**

Total Hours: 120

Code	Title	Hours
Advanced MATH/CS Electives		
MATH 3323	Differential Equations	3
MATH 3348	Deterministic Operations Research	3
MATH 3398	Discrete Mathematics II	3
MATH 4306	Fourier Series and Boundary Value Problems	3
MATH 4315	Analysis II	3
MATH 4330	General Topology	3
MATH 4336	Studies in Applied Mathematics	3
MATH 4337A	Topological Data Analysis	3
MATH 4337C	Numerical Methods for Ordinary Differential Equations	3
MATH 4337H	Undergraduate Research in Topology and Artificial Neural Networks	3
MATH 4350	Introduction to Combinatorics	3
CS 2315	Computer Ethics	3
CS 2318	Assembly Language	3
CS 3339	Computer Architecture	3
CS 3360	Computing Systems Fundamentals	3
CS 3398	Software Engineering	3
CS 4315	Introduction to Data Mining and Information Retrieval	3
CS 4332	Introduction to Database Systems	3
CS 4337	Introduction to Computer Vision	3
CS 4346	Introduction to Artificial Intelligence	3
CS 4371	Computer System Security	3
CS 4379E	Introduction to Network Science	3
CS 4379F	Distributed Data Processing	3
CS 4379Q	Introduction to Recommender Systems	3

It is highly recommended that students choose courses from the following list for general electives:

Code	Title	Hours
IE 3305	Introduction to Data Analysis	3
IE 3340	Operations Research	3
IE 4330	Reliability Engineering	3
IE 4340	Non-Linear Optimization Techniques	3
IE 4342	Advanced Linear and Integer Programming	3
IE 4320	Integrated Production Systems	3
IE 4350	Supply-Chain Engineering	3
IE 4370	Probabilistic Operations Research	3
IE 4381	Introduction to Systems Engineering	3
IE 4399D	Heuristic Optimization Techniques	3
MFGE 4396	Manufacturing Systems Design	3