

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 satisfying the University graduation requirements, students must earn a grade of C or higher in all computer science and mathematics courses used to satisfy the requirements of the computer science major.
- For transfer students, 26-32 semester credit hours in computer science (or their equivalents) may be transferred from a Texas public institution of higher education for the Computer Science Field of Study and be applied to the Bachelor of Science degree with a major in Computer Science at Texas State University. More information about the Field of Study (<http://mycatalog.txstate.edu/undergraduate/general-information/academic-policies/texas-legislative-requirements/>) is available in the Academic Policies section of this catalog. If transferring additional computer science courses please contact the Department of Computer Science for assistance. The transferable Texas Common Course Number (TCCN) is listed below the Texas State University course number in the following course list.

Code	Title	Hours
CS 1319	Fundamentals of Computer Science	3
TCCN: COSC 1336 or 1436 (CS 1319 + 1 hour CS ELNA)		
CS 1428	Foundations of Computer Science I	4
TCCN: COSC 1337 or 1437		
CS 2308	Foundations of Computer Science II	3
TCCN: COSC 2336 or 2436 (CS 2308 + 1 hour CS ELNA)		
CS 2318	Assembly Language	3
TCCN: COSC 2325 or 2425 (CS 2318 + 1 hour CS ELNA)		
MATH 2471	Calculus I	4
TCCN: MATH 2313 or 2413		
MATH 2472	Calculus II	4
TCCN: MATH 2314 or 2414		
PHYS 2325 & PHYS 2125	Mechanics and Mechanics Laboratory	4
TCCN: PHYS 2325 and 2125		
PHYS 2326 & PHYS 2126	Electricity and Magnetism and Electricity and Magnetism Laboratory	4
TCCN: PHYS 2326 and 2126		
Total		26-32

- Students pursuing this B.S. degree program are required to complete 3 hours of technical or scientific writing. A grade of C or higher is required in these hours to satisfy the graduation requirements of the computer science major. Students may select from ENG 3303 or ENG 3313.
- No more than 3 credit hours may be applied to the student's major elective from any combination of the following courses:

Code	Title	Hours
CS 3190	Cooperative Education	1
CS 3290	Advanced Cooperative Education	2
CS 4100	Computer Science Internship	1
CS 4298	Undergraduate Research I	2
CS 4299	Undergraduate Research II	2
CS 4395	Independent Study in Computer Science	3
HON 4390B	Honors Capstone (Department approval required)	3
RES 4399	Mentored Research and Creative Expression (Department approval required)	3

- The required courses for this major include 14 of the 20 hours of coursework required for a Mathematics or Applied Mathematics minor. Therefore, this degree plan includes two additional courses needed to complete one of these minors.
- Nine hours of writing intensive (WI) courses are required for graduation.
- Students must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- 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 language taken in high school, then two semesters of the same modern language (1410 and 1420) must be taken at the college level, and the requirement will be added to the student's degree audit.
- Students must complete 43 hours of Computer Science courses, including one CS project course from: CS 4318, CS 4326, CS 4380, or CS 4398.
- The number of free electives a student will complete varies, depending on the number of hours needed to satisfy the 120 and/or the 36 advanced or 9 hours writing intensive requirements. Students should consult with the academic advisor before enrolling in any free elective courses to ensure that electives are needed.
- 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

	First Semester Hours	Second Semester Hours	Freshman
CS 1428 (TCCN COSC 1437)	4	CS 2308 (TCCN COSC 2336 or 2436)	3
MATH 2471 (Mathematics Component Code 020 [TCCN MATH 2413])	4	MATH 2472 (Component Area Option Code 090/092 [TCCN MATH 2414])	4
US 1100	1	PHIL 1305 or 1320 (Language, Philosophy, and Culture Component Code 040 [TCCN PHIL 1301 or 2306])	3
ENG 1310, 1320, or 1321 (Communication Component Code 010)	3	MATH 2358 (TCCN MATH 2305 or 2405)	3

COMM 1310 (Component Area Option Code 090/091 [TCCN SPCH 1311])	3	POSI 2310 (Government/Political Science Component Code 070 [TCCN GOVT 2306])	3	CS 4326	Human Factors of Computer Systems	3
				CS 4380	Parallel Programming	3
				CS 4398	Software Engineering Project	3

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Sophomore

First Semester Hours	Second Semester Hours	
CS 2318 (TCCN COSC 2325)	3 CS 2315	3
CS 3358	3 CS 3354	3
MATH 3398	3 Life and Physical Sciences Component Code 030 ¹	4
Life and Physical Sciences Component Code 030 ¹	4 Social and Behavioral Sciences Component Code 080	3
	Elective	3

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Junior

First Semester Hours	Second Semester Hours	
CS 3339	3 CS 3360	3
CS 3398	3 CS Advanced Elective	3
Life and Physical Sciences ¹	4 CS Advanced Elective	3
ENG 3303 ²	3 MATH 3305	3
American History Component Code 060	3 American History Component Code 060	3

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Senior

First Semester Hours	Second Semester Hours	
CS 4371	3 CS Advanced Elective	3
CS Advanced Elective	3 Math/Applied Math Minor	3
Math/Applied Math Minor	3 Computer Science Project Course	3
Creative Arts Component Code 050 [HUMA 1315]	3 Elective	2
Elective	3 POSI 2320 (Government/Political Science Component Code 070 [TCCN GOVT 2305])	3

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Total Hours: 120

¹ Life & Physical Sciences must be chosen from: BIO 1330/BIO 1130 & BIO 1331/BIO 1131; PHYS 1315/PHYS 1115 & PHYS 1325/PHYS 1125 [or PHYS 2325/PHYS 2125 & PHYS 2326/PHYS 2126]; CHEM 1341/CHEM 1141 and CHEM 1342/CHEM 1142; or GEOL 1410 & GEOL 1420. Eight hours (2 courses) must be from the same science (BIO, CHEM, GEOL, or PHYS) as listed above. Field of Study requirements of PHYS 1430 and PHYS 2425 will be used to satisfy this requirement.

² Students may take ENG 3313 instead of ENG 3303. If students take ENG 3313, they will need to complete an additional CORE 010 course.

Computer Science Project Course Options

Code	Title	Hours
CS 4318	Compiler Construction	3

Choose 3 hours from the following: