

BACHELOR OF SCIENCE, MAJOR IN SOFTWARE ENGINEERING

Code	Title	Hours
Bachelor of Science, Major in Software Engineering		
Core Curriculum (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/)		
	Component Area I (Communication)	6
	Component Area II (Mathematics) ¹	3
	Component Area III (Life and Physical Science)	8
	Component Area IV (Language, Philosophy, and Culture)	3
	Component Area V (Creative Arts)	3
	Component Area VI (U.S. History)	6
	Component Area VII (Political Science/Government)	6
	Component Area VIII (Social and Behavioral Sciences)	3
	Component Area IX (Component Area Option)	4
Degree Specific Requirements		
MATH 1420	Calculus I ^{1 & 2}	4
MATH 1430	Calculus II	4
MATH 2395	Discrete Mathematics	3
MATH 3379	Statistical Mthods in Practice	3
3 ADV MATH hours		3
Major		
COSC 1436	Programming Fundamentals I	4
COSC 1437	Programming Fundamentals II	4
COSC 2327	Intro to Computer Networks	3
COSC 2329	Comp Organiz & Machine Lang	3
COSC 3312	Numerical Methods	3
COSC 3318	Data Base Management Systems	3
COSC 3319	Data Structures and Algorithms	3
COSC 3321	Digital System Design	3
COSC 3327	Computer Architecture	3
COSC 4314	Data Mining	3
COSC 4318	Advanced Language Concepts	3
COSC 4319	Software Engineering	3
COSC 4320	System Modeling and Simulation	3
COSC 4332	Computer Graphics	3
COSC 4340	Spc Tpcs in Computer Sci	3
COSC 4349	Professionalism and Ethics	3
Electives		
COSC or DFSC Electives (3 hours must be advanced)		6
General Electives		9
Total Hours		120

¹ **MATH 1420** satisfies the Core Curriculum requirement for Component Area II (Mathematics) and one semester credit hour of Component Area IX (Component Area Option).

² Students who are not eligible to take MATH 1420 may have additional mathematics requirements.

First Year

Fall	Hours	Spring	Hours
Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii)		4 Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii)	4

COSC 1436	4	COSC 1437	4
ENGL 1301 ¹	3	ENGL 1302 ¹	3
MATH 1420 ^{2,3}	4	MATH 1430	4
		15	15
Second Year			
Fall	Hours	Spring	Hours
Component Area IV (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav)		3 Component Area V (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav)	3
Component Area VIII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii)		3 COSC 3312	3
COSC 2329		3 COSC 3318	3
HIST 1301 ⁴		3 HIST 1302 ⁴	3
POLS 2305 ⁵		3 POLS 2306 ⁵	3
		15	15
Third Year			
Fall	Hours	Spring	Hours
Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix)		3 COSC 3327	3
COSC 2327		3 COSC 4314	3
COSC 3319		3 COSC 4318	3
COSC 3321		3 Elective	3
MATH 2395		3 MATH 3379	3
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
COSC 4319		3 COSC 4340	3
COSC 4320		3 COSC 4349	3
COSC 4332		3 COSC/DFSC Advanced Elective	3
Elective		3 COSC/DFSC Elective	3
MATH (Advanced)		3 Elective	3
		15	15

Total Hours: 120

- ¹ Satisfies Core Curriculum requirement for Component Area I (Communications).
- ² Satisfies Core Curriculum requirement for Component Area II (Mathematics) and one semester credit hour of the Core Curriculum requirement for Component Area IX (Component Area Option).
- ³ Students who are not eligible to take MATH 1420 may have additional mathematics requirements.
- ⁴ Satisfies Core Curriculum requirement for Component Area VI (U.S. History).
- ⁵ Satisfies Core Curriculum requirement for Component Area VII (Political Science/Government).

The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The BS in Software Engineering is designed to provide graduates with the following marketable skills:

- Software design.
- Database management.
- Complex problem-solving.

- Application of theoretical principles to the solution of technological problems.
- Technical communication.