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)		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/#componentareaiv)	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.