BS COMPUTER SCIENCE-COMPUTER SCIENCE-SOFTWARE ENGINEERING CONCENTRATION

Degree Requirements

Students should refer to their DegreeWorks degree audit in their Web for Students account for more information regarding their degree requirements.

Code	Title	Hours
Major Requirements		
General Education Requirements (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		42
MATH 2413	Calculus I [1]	4
MATH 2414	Calculus II	4
MATH 2305	Discrete Mathematics	3
Math Elective		3
COSC 1315	Introduction to Computer Science	3
EE 340	Computer Architecture	3
CS 310	Analysis of Algorithms	3
CS 332	C++ Programming	3
CS 355	Python Programming	3
CS 361	Database Systems and Design	3
CS 370	Programming Language Design	3
CS 410	Operating Systems	3
CS 420	Computer Networks	3
CS 480	Innovation Lab	1
CS 495	Computer Science Capstone	3
3sch Upper Division Computer Science Elective (300-400 level) [2]		3
Software Engineering Concentration		
MATH 430	Mathematical Modeling	3
CS 360	Artificial Intelligence	3
CS 367	Systems Design & Software Engineering	3
CS 481	Software Project Management	3
CS 483	User Design Methodology	3
MIS 362	Systems Analysis and Design	3
Choose 9sch Upper Division Computer Science Programming Language electives		9
CS 316	Web and UI Design	
CS 352	Java Programming I	
CS 353	Java Programming II	
CS 430	Mobile App Development	
3sch Upper Division Computer Science Electives (300-400 level) [2]		3
Minimum hours for Degree		**120**

1 Satisfies Core Curriculum

2 Upper Division Computer Science Electives include 300 & 400 level CS courses.

Note: A minimum of 54 upper division hours (300 and 400 level courses) are required for this degree. Resident credit totaling 25% of the hours is required for the degree. A minimum GPA of 2.0 is required in three areas for graduation: Overall GPA, Institutional GPA, and Major GPA.

Bachelor of Science - Computer Science with a Software Engineering Concentration - Four Year Plan

First Year

Code	Title	Hours
Fall		**Semester Credit Hours**
ENGL 1301	Composition I requires minimum grade of 'C', Satisfies Core Curriculum	3
HIST 1301	United States History I Satisfies Core Curriculum	3
MATH 1314	College Algebra [1]	3
Language, Philosophy and Culture Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
UNIV 1100	University Foundations	1
Fall Total Semester Credit Hours		**13**
Spring		**Semester Credit Hours**
COSC 1315	Introduction to Computer Science	3
ENGL 1302	Composition II Satisfies Core Curriculum	3
or ENGL 2311	Technical Writing & Communication	
HIST 1302	United States History II Satisfies Core Curriculum	3
SPCH 1315	Public Speaking	3
or COMM 1307	Introduction to Mass Communication	
or COMM 1311	Introduction to Communication Studies	
MATH 1316	Plane Trigonometry	3-4
or MATH 2412	Pre-Calculus	
Spring Total Semester Credit Hours		**15-16**
Total First Year Semester Credit Hours		**28-29**

Second Year

Code	Title	Hours
Fall		**Semester Credit Hours**
Life and Physical Sciences Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3-4
PSCI 2305	U.S. Government and Politics	3
Creative Arts Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
CS 332	C++ Programming	3
MATH 2413	Calculus I	4
Fall Total Semester Credit Hours		**16-17**
Spring		**Semester Credit Hours**
PSCI 2306	State and Local Government	3
Life and Physical Sciences Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3-4
Social and Behavioral Science Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
MATH 2414	Calculus II	4
CS 361	Database Systems and Design	3
Spring Total Semester Credit Hours		**16-17**
Total Second Year Semester Credit Hours		**32-34**

Third Year

Code	Title	Hours
Fall		**Semester Credit Hours**
EE 340	Computer Architecture	3
CS 355	Python Programming	3
CS 367	Systems Design & Software Engineering	3
CS 370	Programming Language Design	3
MIS 362	Systems Analysis and Design	3
Fall Total Semester Credit Hours		**15**
Spring		**Semester Credit Hours**
MATH 2305	Discrete Mathematics	3
CS 360	Artificial Intelligence	3
CS 410	Operating Systems	3
CS 480	Innovation Lab	1
Choose 1 upper Division Computer Science Programming Language Elective:		3
CS 316	Web and UI Design	
CS 352	Java Programming I	
CS 353	Java Programming II	
CS 430	Mobile App Development	
Spring Total Semester Credit Hours		**13**
Total Third Year Semester Credit Hours		**28**

Fourth Year

Code	Title	Hours
Fall		**Semester Credit Hours**
MATH 430	Mathematical Modeling	3
CS 483	User Design Methodology	3
Upper Division Computer Science Elective (300-400 level)		3
CS 495	Computer Science Capstone	3
Choose 1 Upper Division Computer Science Programming Language Elective:		3
CS 316	Web and UI Design	
CS 352	Java Programming I	
CS 353	Java Programming II	
CS 430	Mobile App Development	
Fall Total Semester Credit Hours		**15**
Spring		**Semester Credit Hours**
CS 310	Analysis of Algorithms	3
CS 420	Computer Networks	3
CS 481	Software Project Management	3
Upper Division Computer Science Elective CS 300 - CS 499		3
Choose 1 upper Division Computer Science Programming Language Elective:		3
CS 316	Web and UI Design	
CS 352	Java Programming I	
CS 353	Java Programming II	

CS 430	Mobile App Development	
Spring Total Semester Credit Hours		**15**
Total Fourth Year Semester Credit Hours		**30**
Total Semester Credit Hours required for Degree		**120**

Note: A minimum of 54 upper division hours (300 and 400 level courses) are required for this degree. Resident credit totaling 25% of the hours is required for the degree. A minimum GPA of 2.0 is required in three areas for graduation: Overall GPA, Institutional GPA, and Major GPA.