

Computer Science (BSA)

Total Hours Required: 120

Plan of Study

The Plan of Study is a suggested four-year course sequence to support academic planning and serves as a helpful guide. Currently enrolled students should meet with their academic advisor to tailor their course selections and timelines to their individual goals and circumstances.

Course	Title	Hours
Year 1		
Semester 1		
C S 312	Introduction to Programming	3
M 408C or M 408N	Differential and Integral Calculus or Differential Calculus for Science	4
Social and Behavioral Sciences (080)		3
Visual and Performing Arts (050)		3
First-Year Signature Course (090) approved by departmental advisor		3
Hours		16
Semester 2		
C S 311	Discrete Mathematics for Computer Science	3
C S 314	Data Structures	3
Foreign Language and Culture		3
RHE 306	Rhetoric and Writing	3
M 408S	Integral Calculus for Science	4
Hours		16
Year 2		
Semester 1		
C S 429	Computer Organization and Architecture	4
SDS 321 or M 362K	Introduction to Probability and Statistics or Probability I	3
U.S. History (060)		3
Foreign Language and Culture		3
Minor/Certificate course		3
Hours		16
Semester 2		
C S 439	Principles of Computer Systems	4
M 340L	Matrices and Matrix Calculations	3
U.S. History (060)		3
Minor/Certificate course		3
Free Elective		2
Hours		15
Year 3		
Semester 1		
C S 331	Algorithms and Complexity	3
Natural Science and Technology, Part I (030)		3
Minor/Certificate course		3
GOV 310L	American and Texas Government	3
Humanities (040)		3
Hours		15
Semester 2		
Hours chosen from: Upper-division C S		3
Natural Science and Technology, Part I (030)		3
Minor/Certificate course		3
GOV 312L	Issues and Policies in American Government	3
Free Elective		3
Hours		15
Year 4		
Semester 1		
Hours chosen from: Upper-division C S		3
Foreign Language and Culture		3
Minor/Certificate course		3

Minor/Certificate course	3
Free Elective	3
Hours	15
Semester 2	
Hours chosen from: Upper-division C S	3
Hours chosen from: Upper-division C S	3
<u>Foreign Language and Culture</u>	3
Free Elective	3
Hours	12
Total Hours	120

Requirements

All requirements are listed below, starting with the most specialized moving to the most general. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy [General Education](#) requirements, including [Core Curriculum](#).

Code	Title	Hours
Major		
<i>Mathematics</i>		
Choose a sequence below:		4
Sequence 1:		
M 408S	Integral Calculus for Science	
M 408N	Differential Calculus for Science	
Sequence 2:		
M 408C	Differential and Integral Calculus	
M 340L	Matrices and Matrix Calculations	3
or M 341	Linear Algebra and Matrix Theory	
SDS 321	Introduction to Probability and Statistics	3
or M 362K	Probability I	
<i>Primary Science</i>		
Theory:		
C S 311	Discrete Mathematics for Computer Science	3
or C S 311H	Discrete Mathematics for Computer Science: Honors	
C S 331	Algorithms and Complexity	3
or C S 331H	Algorithms and Complexity: Honors	
Programming:		
C S 312	Introduction to Programming	3
C S 314	Data Structures	3
or C S 314H	Data Structures: Honors	
Systems:		
C S 429	Computer Organization and Architecture	4
or C S 429H	Computer Organization and Architecture: Honors	
C S 439	Principles of Computer Systems	4
or C S 439H	Principles of Computer Systems: Honors	
Hours chosen from: approved upper-division computer science		12
<i>Secondary Science</i>		
Hours chosen from one Field of Study: biology, chemistry, or physics		6
Hours chosen from:		1
C S 103F	Ethical Foundations of Computer Science	
C S 349	Contemporary Issues in Computer Science	
Approved Course		
<i>Subtotal</i>		49
Degree (see details below)		27
Free electives: Additional coursework to reach total hours required.		14
<i>Subtotal</i>		41

General Education	
Remaining Core Curriculum (42 hours total)	30
Foreign Language other than English, Beginning Proficiency	
Subtotal	30
College Requirements - Natural Sciences	
General University Requirements	
Total Hours	120

Degree-Bachelor of Science and Arts (BSA)

The requirements for the Bachelor of Science and Arts are designed to give each student flexibility in the selection of courses to meet individual needs.

Code	Title	Hours
Language, Arts, and Culture		
Hours selected from at least two of the following four areas:		12
Fine arts: courses chosen from design, ensemble, fine arts, music, studio art, performance, visual art studies, art history, and theatre and dance		
Humanities: courses chosen from American studies, ancient history and classical civilization, classical civilization, comparative literature, creative writing, English, humanities, philosophy, religious studies, and rhetoric and writing		
Social and behavioral sciences: courses chosen from anthropology, economics, geography, government, history, linguistics, psychology, and sociology		
Foreign language and culture: foreign language courses or culture courses chosen from an approved list available in the college advising centers. Students who elect to pursue a foreign language must complete a beginning level competency. Students who complete intermediate or advanced level foreign language courses rather than courses equivalent to beginning level competency may count only one intermediate or advanced course toward the language, arts, and culture requirement (a maximum of six hours earned through credit by examination may count toward the language arts and culture requirement)		
Additional Requirements		
Completion of one of the following:		15
Transcript-recognized minor or certificate (minor outside the College of Pharmacy, Cockrell School of Engineering, Jackson School of Geosciences, and School of Nursing)		
Fifteen hours in a single field of study (outside the College of Natural Sciences, College of Pharmacy, Cockrell School of Engineering, Jackson School of Geosciences, and School of Nursing)		
Total Hours		27

Additional Requirements and Policies

- Students may not use a course counting toward one area of prescribed work to fulfill the requirements of another area of prescribed work unless expressly permitted as follows:
 - Courses counting toward the university core curriculum may also count toward the major requirements, the additional requirement, and electives.
 - Per university policy, a minimum of nine hours of the transcript-recognized minor may not be also used to satisfy the major.

c. Per university policy, a minimum of one course taken in a transcript-recognized certificate to satisfy the additional requirement may not also count toward the major.

- Students who seek a transcript-recognized minor or transcript-recognized certificate must meet the minimum grade requirements and grade point average requirements of the program.
- Students must earn a University grade point average of at least 2.00 in all courses taken at the University (including credit by examination, correspondence, and extension), a grade of at least C- in each mathematics and science course counted toward the major, and a grade point average of at least 2.00 in the courses fulfilling the major.
- Students must complete a minimum of 60 hours in residence at the University, including at least 18 hours of the major. The 18 hours of the major in residence must include at least nine hours of advanced coursework.

Additional Requirements and Policies:

At least 17 hours of computer science upper-division coursework must be completed in residence.

An undergraduate may not enroll in any computer science course more than once without written consent of an undergraduate advisor in computer science. No student may enroll in any computer science course more than twice. No student may take more than three upper-division computer science courses in a semester without written consent of an undergraduate advisor in computer science. All transfer coursework must be approved by faculty before it can count towards a computer science degree, except where equivalency is specified by state regulation.