

Computer Science: Integrated Program (BSCompSci/ MCompSci)

Integrated Bachelor’s and Master’s Programs

The Department of Computer Science offers integrated programs to enable currently enrolled, highly motivated undergraduate students with strong intellectual capacities to earn a Bachelor of Science and a Master of Science in Computer Science within a five-year period. The integrated program is designed to prepare students for competitive doctoral programs and provide strong leadership skills and technical depth to students entering professional positions.

Total Hours Required: 150

Undergraduate: 120

Graduate: 30

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	Differential and Integral Calculus	4
<u>U.S. History (060)</u>		3
<u>First-Year Signature Course (090)</u>	approved by departmental advisor	3
<u>Communication (010)</u>		3
Hours		16
Semester 2		
C S 311	Discrete Mathematics for Computer Science	3
C S 314	Data Structures	3
M 408D	Sequences, Series, and Multivariable Calculus	4
<u>U.S. History (060)</u>		3
RHE 306	Rhetoric and Writing	3
Hours		16
Year 2		
Semester 1		
C S 429	Computer Organization and Architecture	4
SDS 321	Introduction to Probability and Statistics	3
<u>American and Texas Government (070)</u>		3
<u>Visual and Performing Arts (050)</u>		3
M 340L	Matrices and Matrix Calculations	3
Free Elective		1
Hours		17
Semester 2		
C S 439	Principles of Computer Systems	4
Hours chosen from: Upper-division C S		3
M 340L	Matrices and Matrix Calculations	3
<u>American and Texas Government (070)</u>		3
BIO 311C	Introductory Biology I	3
Hours		16

Year 3		
Semester 1		
C S 331	Algorithms and Complexity	3
Hours chosen from: Upper-division C S		3
<u>Natural Science and Technology, Part I (030)</u>		3
<u>Foreign Language and Culture</u>		3
BIO 311D	Introductory Biology II	3
Free Elective		3
Hours		18
Semester 2		
Hours chosen from: Upper-division C S		3
Hours chosen from: Upper-division C S		3
<u>Natural Science and Technology, Part I (030)</u>		3
<u>Foreign Language and Culture</u>		3
GEO 401	Physical Geology	4
Hours		16
Year 4		
Semester 1		
Hours chosen from: Upper-division C S		3
Math or Science course		3
Hours chosen from: MS graduate-level coursework		3
Hours chosen from: MS graduate-level coursework		3
<u>Social and Behavioral Sciences (080)</u>		3
Hours		15
Semester 2		
Hours chosen from: Upper-division C S		3
Free Elective		3
<u>Humanities (040)</u>		3
Hours chosen from: MS graduate-level coursework		3
Hours chosen from: MS graduate-level coursework		3
<u>Natural Science and Technology, Part II (093)</u>		3
Hours		18
Year 5		
Semester 1		
Hours chosen from: MS graduate-level coursework		9
Hours		9
Semester 2		
Hours chosen from: MS graduate-level coursework		9
Hours		9
Total Hours		150

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
Concentration		
C S 312	Introduction to Programming	3
Hours chosen from: upper-division computer science		9
Hours chosen from:		3
An alternative sequence from one of the options above.		
GEO 303	Introduction to Geology	
or GEO 301	Physical Geology	
Upper-division Mathematics (excluding M X25K, M X40L, M X41, and M X62K)		
Hours chosen from:		1
C S 349	Contemporary Issues in Computer Science	
C S 103F	Ethical Foundations of Computer Science	
Approved course		

<i>Subtotal</i>	16
Major (see details below)	49
Degree (see details below)	6
Free Elective	7
<i>Subtotal</i>	62
General Education	
<u>Core Curriculum</u>	42
<u>Foreign Language other than English, Beginning Proficiency</u>	
<i>Subtotal</i>	42
<u>College Requirements - Natural Sciences</u>	
<u>General University Requirements</u>	
Graduate coursework	30
Total Hours	150

Major-Computer Science (BSCompSci)

Code	Title	Hours
Choose a sequence below:		8
Sequence 1:		
M 408C	Differential and Integral Calculus	
M 408D	Sequences, Series, and Multivariable Calculus	
Sequence 2:		
M 408N	Differential Calculus for Science	
M 408S	Integral Calculus for Science	
M 408M	Multivariable Calculus	
M 340L	Matrices and Matrix Calculations	3
or M 341	Linear Algebra and Matrix Theory	
M 362K	Probability I	3
or SDS 321	Introduction to Probability and Statistics	
Choose a sequence below:		6
Sequence 1:		
BIO 311C	Introductory Biology I	
BIO 311D	Introductory Biology II	
Sequence 2:		
BIO 315H	Advanced Introduction to Genetics: Honors	
BIO 325H	Genetics: Honors	
Sequence 3:		
CH 301	Principles of Chemistry I	
or CH 301C	Foundations of Chemistry I	
CH 302	Principles of Chemistry II	
or CH 302C	Foundations of Chemistry II	
Sequence 4: Choose from of the following PART A and B		
PART A		
Sequence 1:		
PHY 303K	Engineering Physics I	
PHY 105M	Laboratory For Physics 302K, 303K, and 317K	
Sequence 2:		
PHY 301	Mechanics	
PHY 101L	Laboratory for Physics 301	
Sequence 3:		
PHY 317K	General Physics I	
PHY 105M	Laboratory For Physics 302K, 303K, and 317K	
AND PART B		
Sequence 1:		
PHY 303L	Engineering Physics II	
PHY 105N	Laboratory For Physics 302L, 303L, and 317L	

Sequence 2:		
PHY 316	Electricity and Magnetism	
PHY 116L	Laboratory for Physics 316	
Sequence 3:		
PHY 317L	General Physics II	
PHY 105N	Laboratory For Physics 302L, 303L, and 317L	
C S 311	Discrete Mathematics for Computer Science (minimum grade of C- within two attempts)	3
or C S 311H	Discrete Mathematics for Computer Science: Honors	
C S 331	Algorithms and Complexity (minimum grade of C- within two attempts)	3
or C S 331H	Algorithms and Complexity: Honors	
C S 314	Data Structures (minimum grade of C- within one attempt)	3
or C S 314H	Data Structures: Honors	
C S 429	Computer Organization and Architecture (minimum grade of C- within two attempts)	4
or C S 429H	Computer Organization and Architecture: Honors	
C S 439	Principles of Computer Systems (minimum grade of C- within two attempts)	4
or C S 439H	Principles of Computer Systems: Honors	
Hours chosen from: Additional upper-division C S		12
Total Hours		49

Degree-Bachelor of Science in Computer Science (BSCompSci)

Code	Title	Hours
Select one of the following: foreign language/culture choices (Students in Computer Science Honors, and Honors Computer Science and Business are exempt from this requirement)		6
<u>Foreign Language other than English, Beginning Proficiency</u>		
First course in a foreign language and a three-semester-hour course in the culture of the same language area		
Two three-semester-hour courses in one foreign culture area. The courses must be chosen from an approved list available in the dean's office and the college advising centers. https://cns.utexas.edu/students/degrees-majors-advising/university-core-curriculum/foreign-culture-requirement		
Total Hours		6

Additional Requirements and Policies

Students must also earn a grade of at least C- in each mathematics and science course required for the degree, and a grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in the [General Information Catalog](#). The student must consult the faculty advisor each semester regarding order and choice of work.

At least 21 semester hours of upper-division coursework in computer science must be completed in residence at the University.

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.

Additional Requirements and Policy

Satisfactory Progress

Students are expected to make continuous progress toward the degree by completing required computer science coursework each semester. Those who fail to take program coursework two fall/spring semesters in a row will be removed from the program and re-enrolled in the Bachelor of Science in Computer Science Option that they were following before admission to the Integrated BS/MS Programs. Students will be notified before this action is taken; they must meet with their academic advisor upon being notified.

Warning

The student is placed on warning if his or her grade point average in required undergraduate computer science courses falls below 3.00. Except with the consent of the undergraduate advisor or the graduate advisor, a student on warning may not take graduate computer science courses.

Dismissal

The student is dismissed from the Integrated BS/MS Programs if (1) he or she fails to improve his or her academic performance significantly while on warning, or (2) he or she will not achieve a grade point average of 3.00 even by earning grades of A in all remaining required undergraduate computer science and graduate courses.

Like all students, those in the Integrated BS/MS Programs must know and abide by the academic and disciplinary policies given in this catalog and in the [General Information Catalog](#). Those who fail to do so will be considered for academic dismissal from the program. Under special circumstances and at the discretion of the director, a student may be allowed to continue in the program under academic review. A student who is academically dismissed from the program may enter another computer science program if he or she fulfills the scholastic standards for continuance in the University given in the [General Information Catalog](#). Students in scholastic difficulty should discuss their problems with an academic advisor and the undergraduate faculty advisor.

Graduation

To receive the Bachelor of Science in Computer Science and Master of Science in Computer Science, Master of Science in Information Studies, or Master of Science in Computational Science, Engineering, and Mathematics degrees through the Integrated BS/MS Programs, a student must have a University grade point average of at least 3.00 in the coursework in the Master of Science Program of Work. He or she must also have a grade point average in graduate computer science and information studies, or computational science, engineering, and mathematics coursework of at least 3.00.