

MAJOR IN COMPUTER SCIENCE, COMPUTING FOR CREATIVES CONCENTRATION

To prepare for first semester: The curriculum for the Computer Science major assumes students enter college prepared to take calculus. Entering students who are not prepared to take calculus will need to fulfill pre-calculus requirements in the first semester. All students must maintain a C (2.000) or better in CO 150 and in all CS, DSCI, MATH, STAT, and IDEA courses which are required for graduation.

Major Completion Map

Distinctive Requirements for Degree Program:

Freshman

Semester 1	Critical	Recommended	AUCC	Credits
CO 150 College Composition (GT-CO2)	X		1A	3
First course from Group A, B, or C (See options in Concentration Requirements Tab)	X			2-4
Department Approved Science (See list on Concentration Requirements Tab)	X		3A	3
1C (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#aucc)	X		1C	3
Elective		X		2-4
MATH 124 and MATH 126 may be necessary for some students to fulfill pre-calculus requirements.	X			

Total Credits

15

Semester 2	Critical	Recommended	AUCC	Credits
CS 201/PHIL 201 Ethical Computing Systems (GT-AH3)	X		3B	3
MATH 156 or 160 Mathematics for Computational Science I (GT-MA1) Calculus for Physical Scientists I (GT-MA1)	X		1B	4
Remaining course(s) from Group A, B, or C (See options in Concentration Requirements Tab)	X			0-4
Department Approved Science with Lab (See list on Concentration Requirements Tab)	X		3A	4
CO 150 must be completed by the end of Semester 2 with a grade of C or better.	X			
Elective				0-4

Total Credits

15

Sophomore

Semester 3	Critical	Recommended	AUCC	Credits
CS 165 CS2--Data Structures	X			4
CS 220 Discrete Structures and the Applications	X			4
IDEA 210 Introduction to Design Thinking (GT-AH1)	X		3B	3
Select one course from the following:	X			1-3
STAT 301 Introduction to Applied Statistical Methods				
STAT 302A Statistics Supplement: General Applications				
STAT 307 Introduction to Biostatistics				
STAT 315 Intro to Theory and Practice of Statistics				
Historical Perspectives (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		X	3D	3

Total Credits

15-17

Semester 4	Critical	Recommended	AUCC	Credits
Select one group from the following:	X			4-5
Group A				
CS 214 Software Development				
CT 301 C++ Fundamentals				
Group B				

CS 253	Software Development with C++				
Select one course from the following:		X			2-4
DSCI 369	Linear Algebra for Data Science	X			
MATH 269	Geometric Introduction to Linear Algebra				
MATH 369	Linear Algebra I	X			
Social and Behavioral Sciences (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)			X	3C	3
Electives			X		0-5
CS 165 and CS 220 must be completed by the end of Semester 4.		X			
MATH 156 or MATH 160 and MATH 269 or MATH 369 or DSCI 369 must be completed by the end of Semester 4.		X			
Total Credits					12-14
Junior					
Semester 5		Critical	Recommended	AUCC	Credits
CS 314	Software Engineering	X		4A,4B	3
CS 320	Algorithms–Theory and Practice	X			3
Advanced Writing (https://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)			X	2	3
Electives			X		5
Total Credits					14
Semester 6		Critical	Recommended	AUCC	Credits
CS 250	Computer Systems Foundations		X		4
CS 345	Machine Learning Foundations and Practice	X			3
CS courses numbered 300- or above, excluding 386-399 and 486-499		X			3-4
Electives			X		5-6
CS 314 and CS 320 and CS 345 must be completed by the end of Semester 6.		X			
Total Credits					16
Senior					
Semester 7		Critical	Recommended	AUCC	Credits
Capstone Course - Select one course from the following:		X			4
CS 462	Engaging in Virtual Worlds	X		4C	
CS 464	Principles of Human-Computer Interaction			4C	
CS 465	Multimodal Interaction for 3D User Interfaces			4C	
CS course numbered 400- or above, excluding 486-499		X			4
Design thinking Courses (see list on Program Requirements tab)		X			9
At least 2 Upper-Division CS classes must be completed by the end of Semester 7.		X			
Total Credits					17
Semester 8		Critical	Recommended	AUCC	Credits
CS course numbered 400- or above, excluding 486-499		X			4
Electives		X			10
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.		X			
Total Credits					14
Program Total Credits:					120