MAJOR IN COMPUTER SCIENCE, COMPUTER SCIENCE 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 departmental Technology Focus Elective 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)			1A	3
First course from Group A, B, or C (See options in Concentration Requirements Tab)			X		2-3
Department Approved Science (See list on Concentration Requirements Tab)				3A	3
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)		X		1C	3
Elective					1
MATH 124 and MATH 126 may be necessary for some students to fulfill pre-calculus requirements.		X			
	Total Credits				**12-13**

Semester 2		Critical	Recommended	AUCC	Credits
CS 201/PHIL 201	Ethical Computing Systems (GT-AH3)			3B	3
MATH 156 or 160	Mathematics for Computational Science I (GT-MA1) Calculus for Physical Scientists I (GT-MA1)			1B	4
Remaining course(s) from Group A, B, or C (See options in Concentration Requirements Tab)		X			2-4
Department Approved Science with Lab (See list on Concentration Requirements Tab)				3A	4
Electives					0-4
CO 150 must be completed by the end of Semester 2 with a grade of C or better.		X			
	Total Credits				**13-19**

Sophomore

Semester 3		Critical	Recommended	AUCC	Credits
CS 165	CS2--Data Structures		X		4
CS 220	Discrete Structures and their Applications		X		4
Select one course from the following:					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 (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)				3D	3
Electives					0-4
	Total Credits				**16**

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			4
CS 250	Computer Systems Foundations		X		
CS 270	Computer Organization		X		
Select one course from the following:					3-4
DSCI 369	Linear Algebra for Data Science	X			
MATH 369	Linear Algebra I	X			
Social and Behavioral Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#social-behavioral-sciences)				3C	3
CS 165 and CS 220 and CS 270 must be completed by the end of Semester 4.		X			
MATH 156 or MATH 160 and MATH 369 or DSCI 369 must be completed by the end of Semester 4.		X			
	Total Credits				**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 (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#advanced-writing)				2	3
Electives					5-6
CS 253 must be completed by the end of Semester 5.		X			
	Total Credits				**15**

Semester 6		**Critical**	**Recommended**	**AUCC**	**Credits**
CS 370	Operating Systems				3
Two CS courses numbered 300- or above, excluding 380-399 and 480-499			X		6-8
Electives					5-6
CS 314 and CS 320 and CS 370 must be completed by the end of Semester 6.		X			
	Total Credits				**15**

Senior

Semester 7		**Critical**	**Recommended**	**AUCC**	**Credits**
Capstone Course (See Capstone Course List on Concentration Requirements tab)		X		4C	4
CS course numbered 400- or above, excluding 480-499			X		4
Technology Focus or Minor/Second Major courses					6
At least 2 Upper-Division CS classes must be completed by the end of Semester 7.		X			
	Total Credits				**14**

Semester 8		**Critical**	**Recommended**	**AUCC**	**Credits**
CS*** Course numbered 400- or above		X			4
Technology Focus or Minor/Second Major courses		X			4
Electives		X			8
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.		X			
	Total Credits				**16**
	Program Total Credits:				**120**