

# Bachelor of Science in Computer Science Curriculum Flowchart

## PARTNERSHIP PROGRAM COMPUTER SCIENCE & ENGINEERING

Western	Year 1	Fall 18 credits	<b>MATH 151 (4)</b> Calculus 1 (PR: ACT math 27, SAT math 630, ALEKS 76, or MATH 141)	<b>PHYS 190 (3)</b> General Physics 1 (PR/CR: MATH 151, PHYS 185)	<b>PHYS 185 (1)*</b> Laboratory Physics 1 (PR/CR: PHYS 190)	<b>CS 190 (3)</b> Computer Science 1 (Free Elective)	<b>ENG 102 (3)</b> Academic Writing (Free Elective)	<b>Humanities &amp; Social Science (3)</b> Lower Division	<b>HWTR 100 (1)</b> CS-based Headwaters
		Spring 17 credits	<b>MATH 251 (4)</b> Calculus 2 (PR: MATH 151)	<b>Natural Science Sequence (4)</b> PHYS 191+186^ preferred (PR: PHYS 190 PR/CR: PHYS 186)	<b>CS 191 (3)</b> Computer Science 2 (PR: CS 190)	<b>PHIL 100 or PHIL 200 (3)^</b> Critical Thinking or Symbolic Logic	<b>Humanities &amp; Social Science (3)</b> Lower Division		
	Year 2	Fall 15 credits	<b>MATH 314 (3)*</b> Applied Probability (PR: MATH 251)	<b>Natural Science (3)</b>	<b>CS 280 (3)</b> Data Structures (PR: CS 191)	<b>CS 330 (3)*</b> Operating Systems & Architecture (PR: CS 191)	<b>Humanities &amp; Social Science (3)</b> Lower Division		
		Spring 15 credits	<b>MATH 200 (3)</b> Discrete Mathematics (PR: MATH 151, CS 190)	<b>CS 370 (3)^</b> Systems Programming in C (PR: CS 280)	<b>CS 412 (3)^</b> Software Engineering (PR: CS 280)	<b>PHIL 135 (3)^</b> Introduction to Ethics	<b>Free Elective (3)</b>		
CU Boulder	Year 3	Fall 16 credits	<b>CSCI 2820 (3)*</b> Linear Algebra w/ CS Applications (PR: MATH 251, CS 280)	<b>Natural Science (3)</b>	<b>CSCI 3104 (4)*</b> Algorithms (PR: MATH 200, MATH 251, CS 280)	<b>CSCI Core/Elective (3)</b>	<b>CSCI Core/Elective (3)</b>		
		Spring 14 credits	<b>CSCI 3155 (4)^</b> Principles of Programming Languages (PR: MATH 200, CS 280, CS 330, CS 370)	<b>CSCI Core/Elective (4)</b>	<b>CSCI Core/Elective (3)</b>	<b>ENG 302 (3)</b> Technical Writing (PR: ENG 102)			
	Year 4	Fall 17 credits	<b>CSCI 4308 (4)*</b> Software Engineering Project 1	<b>Natural Science (3)</b>	<b>CSCI Core/Elective (4)</b>	<b>CSCI Core/Elective (3)</b>	<b>Humanities &amp; Social Science (3)</b> Upper Division		
		Spring 16 credits	<b>CSCI 4318 (4)^</b> Software Engineering Project 2 (PR: CSCI 4308)	<b>CSCI Core/Elective (3)</b>	<b>CSCI Core/Elective (3)</b>	<b>Humanities &amp; Social Science (3)</b> Upper Division	<b>Free Elective (3)</b>		

**Admission to CU Boulder**

- Complete a college-level, two-course sequence in calculus w/ grade of B- or higher
- Complete one college-level physical science course (calc-based physics &/or college chemistry w/ grade of B- of higher
- Maintain a cumulative GPA of 3.0 or higher

The minimum passing grade for prerequisite and co-requisite classes specifically for computer science majors is a C-.

**Key**

PR = Pre-requisite  
CR = Co-requisite  
\* = Fall only course  
^ = Spring only course

CS Senior Capstone

A minimum of 36 CS foundation, core and/or elective credits must be completed before Senior Capstone

Can be taken any semester pending completion of any pre/co-requisites

Must be completed before Senior Capstone