University of Colorado Boulder

WESTERN COLORADO UNIVERSITY

PARTNERSHIP PROGRAM
COMPUTER SCIENCE & ENGINEERING

Bachelor of Science in Computer Science
Curriculum Flowchart

Western

Year 1

Fall — 18 credits

MATH 151 (4) Calculus 1 (PR: ACT math 27, SAT math 630, ALEKS 76, or MATH 141)	**PHYS 190 (3)** General Physics 1 (PR/CR: MATH 151, PHYS 185)	**PHYS 185 (1)*** Laboratory Physics 1 (PR/CR: PHYS 190)	**CS 190 (3)** Computer Science 1 (Free Elective)	**ENG 102 (3)** Academic Writing (Free Elective)	**Humanities & Social Science (3)** Lower Division	**HWTR 100 (1)** CS-based Headwaters

Spring — 17 credits

MATH 251 (4) Calculus 2 (PR: MATH 151)	**Natural Science Sequence (4)** PHYS 191+186^ preferred (PR: PHYS 190 PR/CR: PHYS 186)	**CS 191 (3)** Computer Science 2 (PR: CS 190)	**PHIL 100 or PHIL 200 (3)^** Critical Thinking or Symbolic Logic	**Humanities & Social Science (3)** Lower Division

Year 2

Fall — 15 credits

MATH 314 (3)* Applied Probability (PR: MATH 251)	**Natural Science (3)**	**CS 280 (3)** Data Structures (PR: CS 191)	**CS 330 (3)*** Operating Systems & Architecture (PR: CS 191)	**Humanities & Social Science (3)** Lower Division

Spring — 15 credits

MATH 200 (3)^ Discrete Mathematics (PR: MATH 151, CS 191)	**CS 370 (3)^** Systems Programming in C (PR: CS 280)	**CS 412 (3)^** Software Engineering (PR: CS 280)	**PHIL 135 (3)^** Introduction to Ethics	**Free Elective (3)**

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Year 3

Fall — 16 credits

CSCI 2820 (3)* Linear Algebra w/ CS Applications (PR: MATH 251, CS 280)	**Natural Science (3)**	**CSCI 3104 (4)*** Algorithms (PR: MATH 200, MATH 251, CS 280)	**CSCI Core/Elective (3)** CSCI 3010* preferred (PR: CS 280 PR/CR: CS 412)	**CSCI Core/Elective (3)**

Spring — 14 credits

CSCI 3155 (4)^ Principles of Programming Languages (PR: MATH 200, CS 280)	**CSCI Core/Elective (4)**	**CSCI Core/Elective (3)**	**ENG 302 (3)** Technical Writing (PR: ENG 102)

Year 4

Fall — 17 credits

CSCI 4308 (4)* Software Engineering Project 1	**Natural Science (3)**	**CSCI Core/Elective (4)**	**CSCI Core/Elective (3)**	**Humanities & Social Science (3)** Upper Division

Spring — 16 credits

CSCI 4318 (4)^ Software Engineering Project 2	**CSCI Core/Elective (3)**	**CSCI Core/Elective (3)**	**Humanities & Social Science (3)** Upper Division	**Free Elective (3)**

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

- (orange box) CS Senior Capstone
- (green box) A minimum of 36 CS foundation, core and/or elective credits must be completed before Senior Capstone
- (gray box) Can be taken any semester pending completion of any pre/co-requisites
- (dashed yellow box) Must be completed before Senior Capstone