

COMPUTER SCIENCE MAJOR: STANDARD PROGRAM

Program Requirements

All standard majors require a minor in a second discipline or a second major.

A minimum of 45 credits is required, including the 33-credit Computer Science Core:

Code	Title	Credits
Computer Science Core		
CS 190	Computer Science I	3
CS 191	Computer Science II	3
CS 195	Database Management Systems	3
CS 250	Web Applications Development I	3
CS 280	Data Structures	3
CS 330	Operating Systems and Architecture	3
CS 370	Systems Programming in C	3
CS 412	Software Engineering	3
CS 470	Algorithms	3
CS 495	Senior Project	3
MATH 200	Discrete Mathematics	3
Total Credits		33

And the following:

Code	Title	Credits
MATH 140	College Algebra (GT-MA1)	3
or MATH 141	Precalculus (GT-MA1)	
or MATH 151	Calculus I (GT-MA1)	
AND		9
At least 3 upper division CS courses (including CS 220, CS 235 or ENG 302 and excluding any core courses included in the standard program)		
OR		
At least 2 upper division CS courses (including CS 220, CS 235 or ENG 302 and excluding any core courses included in the standard program) and one math course from MATH 252, MATH 275, MATH 300, MATH 313, MATH 358, MATH 360 and MATH 380		
Total Credits		12

Capstone Course Requirement

The following course fulfills the capstone course requirement in the Computer Science Major: CS 495 SENIOR PROJECT.

Graduation Requirements

Undergraduate programs require a minimum of 120 semester credits for graduation. Of those 120 credits, 40 credits must be in upper-division courses (those marked 300 and above). Fifteen of these 40 upper-division credits must be earned in courses that are part of the standard or comprehensive major program being pursued.

Students are expected to review all graduation requirements, which can be found in the Western Undergraduate Catalog: Graduation

Requirements (<https://catalog.western.edu/undergraduate/graduation-requirements/>).

Course	Title	Credits
Year One		
Fall		
CS 190	Computer Science I	3
Elective	Elective or minor course	3
ENG 102	Writing and Rhetoric I (GT-CO1)	3
Gen Ed	Arts & Humanities	3
HWTR 100	First Year Seminar	1
MATH 140 or MATH 141 or MATH 151	College Algebra (GT-MA1) or Precalculus (GT-MA1) or Calculus I (GT-MA1)	3
Credits		16
Spring		
CS 191	Computer Science II	3
CS 195	Database Management Systems	3
ENG 103	Writing and Rhetoric II (GT-CO2)	3
Elective	Elective or minor course	3
Gen Ed	Social Sciences	3
Credits		15
Year Two		
Fall		
CS 280	Data Structures	3
CS 330 or CS 250	Operating Systems and Architecture or Web Applications Development I	3
Elective	Elective or minor course	3
Gen Ed	Natural Sciences w/lab	4
Gen Ed	Social Sciences	3
Credits		16
Spring		
CS 412	Software Engineering	3
MATH 200	Discrete Mathematics	3
Elective	Elective or minor course	6
Gen Ed	Arts & Humanities	
Gen Ed	Natural Sciences w/lab	4
Credits		16
Year Three		
Fall		
CS 250 or CS 330	Web Applications Development I or Operating Systems and Architecture	3
Elective	Elective or minor course	3
Elective	Upper division elective or minor course	6
Gen Ed	Social Sciences	3
Credits		15
Spring		
CS 370	Systems Programming in C	3
CS	Upper division CS elective	3
Elective	Elective or minor course	3
Elective	Upper division elective or minor course	3
Gen Ed	Arts & Humanities	3
Credits		15
Year Four		
Fall		
CS 470	Algorithms	3
CS	Upper division CS elective	3
Elective	Elective or minor course	3
Elective	Upper division elective or minor course	6
Credits		15
Spring		
CS 495	Senior Project	3

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CS	Upper division CS elective	3
Elective	Elective or minor course	3
Elective	Upper division elective or minor course	6
Credits		15
Total Credits		123