COMPUTER SCIENCE COMPREHENSIVE MAJOR: INFORMATION SECURITY EMPHASIS

Program Requirements

A minimum of 60 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
CS 170	Information Security and Hacking	3
CS 235	Computers Networks	3
CS 360	System Security	3
CS 450	Ethical Hacking and Malware	3
CS 460	Network Security	3
MATH 140	College Algebra (GT-MA1)	3
AND		9
At least 3 upper division CS courses (including CS 220 and excluding any core courses included in the information security emphasis)		
OR		
At least 2 upper division CS courses (including CS 220 and excluding any core courses included in the information security emphasis) and one math course from MATH 151, MATH 213, MATH 260, or MATH 380		
Total Credits		**27**

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 170	Information Security and Hacking	3
CS 190	Computer Science I	3
ENG 102	Writing and Rhetoric I (GT-CO1)	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
Gen Ed	Arts & Humanities	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	Arts & Humanities	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
Elective	Elective or minor course	6
Gen Ed	Natural Sciences w/lab	4
Gen Ed	Social Sciences	
MATH 200	Discrete Mathematics	3
	Credits	**16**
Year Three		
Fall		
Choose 1 Pair based on the year of program start:		6
Pair 1	CS 250 AND upper division CS Elective	
Pair 2	CS 330 AND CS 235	
Gen Ed	Social Sciences	3
Elective	Elective or minor course	9
	Credits	**18**
Spring		
Choose 1 Pair based on the year of program start:		6
Pair 1	CS 360 AND upper division CS Elective	
Pair 2	CS 450 AND CS 460	
CS 370	Systems Programming in C	3
Elective	Elective or minor course	3
Gen Ed	Arts & Humanities	3
	Credits	**15**
Year Four		
Fall		
CS 235	Computers Networks	3
CS 470	Algorithms	3

CS	Upper division CS elective	3
Elective	Elective or minor course	3
Elective	Upper division elective or minor course	3
	Credits	**15**
Spring		
Choose 1 Pair based on the year of program start:		6
Pair 1	CS 450 AND CS 460	
Pair 2	CS 360 AND upper division CS Elective	
CS 495	Senior Project	3
Elective	Elective or minor course	3
	Credits	**12**
	Total Credits	**123**