

COMPUTER SCIENCE B.S.

Bachelor of Science - Computer Science

College of Humanities & Sciences

Degree Specific Credits: 87-92

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umd.edu/academics/general-education-requirements>) of the catalog.

Summary

Code	Title	Hours
Computer Science Core Courses		33
Degree Electives		18
Communication		3
Mathematics		18
Science Core		9-10
Biology		
Chemistry		
Physics		
Science Electives		6-10
Total Hours		87-92

Computer Science Core Courses

Note: 100-level CSCI courses other than CSCI 106, CSCI 135-CSCI 136, and 200-level CSCI courses other than CSCI 205 and CSCI 232 do not count toward the degree or track requirements. However, they do count in the 60 credit limit in the major. CSCI 315E will fulfill the upper-division writing requirement.

Code	Title	Hours
Complete all of the following courses:		
CSCI 106	Careers in Computer Science	1
CSCI 135	Fund of Computer Science I	3
CSCI 136	Fund of Computer Science II	3
CSCI 205	Programming Languages w/ C/C++	4
CSCI 232	Data Structures and Algorithms	4
CSCI 315E	Computers, Ethics, and Society	3
CSCI 323	Software Science	3
CSCI 332	Design/Analysis of Algorithms	3
CSCI 361	Computer Architecture	3
CSCI 426	Adv Prgrmg Theory/Practice I	3
CSCI 427	Adv Prgrmg Theory/Practice II	3
Total Hours		33

Minimum Required Grade: C-

Degree Electives

Note: A maximum of 3 of the 18 credits of Computer Science electives may be in CSCI 398 or CSCI 498.

Code	Title	Hours
Complete 18 credits of the following courses:		18
CSCI 340	Database Design	
CSCI 390	Research	
CSCI 391	Special Topics	
CSCI 394	Seminar	
CSCI 398	Internship	
CSCI 411	Advanced Web Programming	
CSCI 412	Game and Mobile App	
CSCI 441	Computer Graphics Programming	
CSCI 443	User Interface Design	
CSCI 444	Data Visualization	
CSCI 446	Artificial Intelligence	
CSCI 447	Machine Learning	
CSCI 448	Pattern Recognition	
CSCI 451	Computational Biology	
CSCI 460	Operating Systems	
CSCI 466	Networks	
CSCI 477	Simulation	
CSCI 490	Research	
CSCI 491	Special Topics	
CSCI 494	Seminar	
CSCI 498	Internship	
CSCI 499	Senior Thesis/Capstone	
Total Hours		18

Minimum Required Grade: C-

Communication

Code	Title	Hours
Complete one of the following courses:		3
COMX 111A	Introduction to Public Speaking	
COMX 242	Argumentation	
Total Hours		3

Minimum Required Grade: C-

Mathematics

Code	Title	Hours
Complete all of the following courses:		
M 171	Calculus I	4
M 172	Calculus II	4
M 221	Introduction to Linear Algebra	4
M 225	Introduction to Discrete Mathematics	3
STAT 341	Introduction to Probability and Statistics	3
Total Hours		18

Minimum Required Grade: C-

Science Core

Rule: Complete 1 of the following subcategories of science sequences. 9-10 total credits required.

Biology Sequence Option

Code	Title	Hours
Complete all of the following courses:		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
Total Hours		9

Minimum Required Grade: C-

Chemistry Sequence Option

Code	Title	Hours
Complete all of the following courses:		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

Physics Sequence Option

Code	Title	Hours
Complete all of the following courses:		
PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

Science Electives

Rule: Complete 2 of the following courses. Laboratory courses must be taken in conjunction with their associated lecture course.

Note: The Biology, Chemistry, or Physics sequence chosen to fulfill the science core may not count toward the science electives requirement.

Code	Title	Hours
Complete two of the following courses:		6-10
ASTR 131N & ASTR 134N	Planetary Astronomy and Planetary Astronomy Lab	
ASTR 132N & ASTR 135N	Stars, Galaxies, and the Universe and Stars, Galaxies, and the Universe Lab	
BIOB 160N & BIOB 161N	Principles of Living Systems and Prncpls of Living Systems Lab	
BIOB 170N & BIOB 171N	Prncpls Biological Diversity and Prncpls Biological Dvrsty Lab	
BIOM 250N & BIOM 251	Microbiology for Hlth Sciences and Microbiology Hlth Sciences Lab	

CHMY 141N College Chemistry I
& CHMY 142N and College Chemistry I Lab

CHMY 143N College Chemistry II
& CHMY 144N and College Chemistry II Lab

FORS 201 Forest Biometrics

GEO 101N Introduction to Physical Geology
& GEO 102N and Introduction to Physical Geology Lab

GEO 225 Earth Materials

PHSX 215N Fund of Physics w/Calc I
& PHSX 216N and Physics Laboratory I w/Calc

PHSX 217N Fund of Physics w/Calc II
& PHSX 218N and Physics Laboratory II w/Calc

PHSX 343 Modern Physics

PHSX 444 Advanced Physics Lab

Total Hours 6-10

Minimum Required Grade: C-