

COMPUTER SCIENCE EMPHASIS, AS - WITH PORTLAND STATE UNIVERSITY

Program Code: AS.PSUCOMPSCI

An Associate of Science with an emphasis in Computer Science is a transfer degree intended to provide students with an overwhelming majority of the first two years' coursework required for a Bachelor of Science in Computer Science.

A degree in Computer Science is a degree in programming: creating new software applications. This is a high-demand, high-paying field that offers job security and ongoing growth as the number of computing devices and demand for sophisticated operating systems, web and productivity applications, and games increases. We encourage all students interested in this program to pursue a co-enrollment option with the university.

For information contact Jen Miller, 503-594-3138 or jen.miller@clackamas.edu (%20jen.miller@clackamas.edu), or Richard Albers, 503-594-3166 or richa@clackamas.edu

Outcomes

Program Outcomes

Upon successful completion of this program, students should be able to:

- explain the software development lifecycle and the specific tools and processes used to create software;
- describe the components, purposes, and benefits of both structured and object-oriented programming paradigms and demonstrate the development of software using them in a high-level language;
- explain and demonstrate various ways information is stored and manipulated, at both a low and high level, in computer systems and software;
- employ mathematics and computing techniques in a system and rigorous manner to solve technical problems;
- exhibit good teamwork skills and serve as effective members of project teams.

Requirements

Course	Title	Credits
First Year		
Fall Term		
CS-160	Computer Science Orientation	4
CS-161	Computer Science I	4
MTH-251	Calculus I	5
Credits		13
Winter Term		
CS-162	Computer Science II	4
MTH-252	Calculus II	5
Science Electives (p. 2)		4
Credits		13

Course	Title	Credits
Spring Term		
CS-140L	Linux for Programmers	4
CS-260	Data Structures	4
MTH-253	Calculus III	5
Select one of the following:		3-4
Arts & Letters Electives (p.)		
Social Science Electives (p. 2)		
Credits		16-17

Summer Term		
COMM-111	Public Speaking	4
MTH-261	Linear Algebra	4
WR-121	English Composition	4
Select one of the following:		4
Arts & Letters Electives (p.)		
Social Science Electives (p. 2)		
Credits		16

Second Year		
Fall Term		
Select one of the following:		5
BI-211	General Biology for Science Majors (Cellular Biology)	
CH-221	General Chemistry	
PH-211	General Physics With Calculus	
CS-201	Computer Systems II	4
Select one of the following:		4
Arts & Letters Electives (p.)		
Social Science Electives (p. 2)		
Credits		13

Winter Term		
Select one of the following:		5
BI-212	General Biology for Science Majors (Animal Biology)	
CH-222	General Chemistry	
PH-212	General Physics With Calculus	
CS-202	Program Structures	4
CS-250	Discrete Structures I	4
WR-227	Technical Report Writing	4
Credits		17

Spring Term		
Select one of the following:		5
BI-213	General Biology for Science Majors (Plant Biology & Ecology)	
CH-223	General Chemistry	
PH-213	General Physics With Calculus	
CS-251	Discrete Structures II	4
Computer Science Electives (p. 2)		3-4
Credits		12-13
Total Credits		100-102

Arts & Letters Electives

ART, MUS, or TA courses 100 level or above relating to history and appreciation, not performance, or any 100 level or above Arts & Letters or Social Science course in the prefixes of: ASL, BA, COMM, ENG, FR, GER, HUM, J, MUP, PHL, R, SPN, WR

Social Science Electives

Any 100-level or above in the prefixes of: ANT, EC, GEO, HST, PS, PSY, SOC, SSC, WS

Computer Science Electives

Any CS course not already included in the program

Science Electives

Any General Education science course listed under prefixes: BI, CH, ESR, G, and PH in the AAOT

Careers

AS degrees are not designed to be direct-to-work credentials. Students completing a Bachelor of Science in Computer Science, depending upon internships and focused electives, would be qualified for a career in computer programming with possible job titles including, but not limited to:

- application developer
- game developer
- web developer