

COMPUTER SCIENCE, ASSOCIATE IN SCIENCE DEGREE

Financial Aid Eligible
Banner Code: 1_AS_CSPR
Control Number: 08624

This certificate is designed to provide the student with comprehensive grounding in the theory and practice of modern computer programming. Based on the recommendations of the Association of Computing Machinery, the Computer Programming Certificate prepares students to work as entry-level programmers. Students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities. Students should consult the Transfer Information section of this catalog for specific transfer information.

Complete the Computer Science Certificate of Achievement and the Associate in Science graduation requirements as outlined in the Graduation Requirements section of the catalog.

Program Outcome

1. Based on the recommendations of the Association for Computing Machinery, The Computer Programming Certificate prepares students to work as entry-level programmers, or used to fulfill some of the requirements for transfer to a Computer Science program at a four-year university.

Associate in Science Degree Requirements

1. **UNIT REQUIREMENT** - 60 UNITS, with at least a 2.0 grade point average. At least 12 of the units must be earned at OCC, with a minimum of one course taken for a letter grade. At least 3 units in an advanced course from the program must be completed at OCC. A student must be enrolled at the time of application for graduation. Units earned at an accredited college or university on a credit/no credit basis will be counted toward the degree requirements of the college, to a maximum of 15 units.
2. **MAJOR REQUIREMENT** - Complete the AA or AS major requirements as detailed in the Degree and Certificate section of this catalog.
3. **MATHEMATICS REQUIREMENT** - Demonstrate competence in mathematics by either obtaining a satisfactory grade (grade of "C" or better or "pass") in a mathematics course at or above the level of Intermediate Algebra as demonstrated by prior coursework, or by demonstrating competency that is comparable through the completion of a college-level math course that has Intermediate Algebra as a prerequisite: Psychology A160 or Math A100 or higher, with the exception of Math A220.
4. **GENERAL EDUCATION REQUIREMENT** - Students may choose to complete Option 1 (OCC AA GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-arts-general-education-option-1/>), Option 1 (OCC AS GE) (<https://catalog.cccd.edu/orange-coast/pathways/computers-computing/computer-science/computer-science-associate-science-degree/orange-coast/general-education-patterns/associate-science-general-education-option-1/>), Option 2 (CSU GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-2/>), or Option 3

(IGETC (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-3/>)) to satisfy the general education requirement. See the General Education Patterns section of this catalog for more information.

Course	Title	Units
Required Courses		
CS A150	C++ Programming Language 1	4
CS A170	Java Programming 1	4
CS A250	C++ Programming Language 2	4
CS A200	Data Structures	3-4
or CS A262	Discrete Structures	
Select one of the following:		4-5
MATH A180/ A180H	Calculus 1	
MATH A182H	Calculus 1 and 2 Honors	
MATH A185/ A185H	Calculus 2	
Total Units		19-21
Requirement		Units
Program Major Units		19-21
AS General Education Option 1, 2, or 3		Varies
Transferable electives to satisfy unit requirement		Varies
Total Degree Units		60