COMPUTER SCIENCE, ASSOCIATE IN SCIENCE DEGREE

Banner Code: 1_AS_CSPR
Financial Aid Eligible

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

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.

Review Graduation Requirements (https://catalog.cccd.edu/orange-coast/graduation-requirements/associate-degree/) and General Education (https://catalog.cccd.edu/orange-coast/general-education-patterns/).

Course	Title	Units
Required Courses		
CS A131	Python Programming I	4
or CS A170	Java Programming 1	
CS A150	C++ Programming Language 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 Minimum Degree Units	60

Program Sequence

These sequences at Orange Coast College are general course curriculum maps for students to finish all major and general education requirements for two-year completion of degrees, and/or fulfillment of transfer requirements. The course sequence may include course prerequisites and other placement requirements. **Students are advised to meet with an Orange Coast College Counselor to review course selections and sequences to ensure that completion of this program will meet a student's transfer and career goals.**

Course	Title	Units
Year 1		
Semester 1		
CS A131	Python Programming I	4
or CS A170	or Java Programming 1	
MATH A180	Calculus 1 [1]	4-5
or MATH A182H	or Calculus 1 and 2 Honors	
or MATH A185H	or Calculus 2 Honors	
OCC AS GE AREA A1 - CHOOSE ONE		3
OCC AS GE AREA C1 - CHOOSE ONE		3
	Units	**14-15**
Semester 2		
CS A150	C++ Programming Language 1	4
OCC AS GE AREA C2 - CHOOSE ONE		3
ELECTIVE (DEGREE APPLICABLE)		9
	Units	**16**
Year 2		
Semester 1		
CS A250	C++ Programming Language 2	4
OCC AS GE AREA B - CHOOSE ONE		3-4
OCC AS GE AREA D - CHOOSE ONE		3
ELECTIVE (DEGREE APPLICABLE)		3
	Units	**13-14**
Semester 2		
CS A200	Data Structures	3-4
or CS A262	or Discrete Structures	
ELECTIVE (DEGREE APPLICABLE) [2]		14
	Units	**17-18**
	Total Units	**60-63**

[1] OCC AS GE AREA A2 and Math competency requirement
[2] VARIES TO REACH MINIMUM 60 DEGREE APPLICABLE UNITS