## COMPUTER SCIENCE, CERTIFICATE OF ACHIEVEMENT

**Banner Code:** 1\_CN\_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.

## **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/certificates/#achievementtext).

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

## **Program Sequence**

These sequences at Orange Coast College are curriculum maps for students to finish all requirements for the certificate. There may be advisories, prerequisites, or time requirements that students need to consider before following these maps. Students are advised to meet with an Orange Coast College Counselor for alternate sequencing.

Course	Title	Units
Year 1		
Semester 1		
CS A131	Python Programming I	4
or CS A170	or Java Programming 1	
	Units	4
Semester 2		
CS A150	C++ Programming Language 1	4
MATH RESTRICTED	4-5	
MATH A180	Calculus 1	
or	or Calculus 1 Honors	
MATH A180H		
MATH A182H	Calculus 1 and 2 Honors	
MATH A185	Calculus 2	
or	or Calculus 2 Honors	
MATH A185H		
	Units	8-9
Year 2		
Semester 1		
CS A250	C++ Programming Language 2	4
	Units	4
Semester 2		
CS A200	Data Structures	3-4
or CS A262	or Discrete Structures	
	Units	3-4
	Total Units	19-21