INFORMATION AND COMPUTER SCIENCES, CERTIFICATE OF ACHIEVEMENT

Banner Code: 3_CN_ICS
Control Number: 44207
Not Financial Aid Eligible

This certificate program is designed to provide students with a strong foundation in computer science, information technology, and related disciplines. Hands-on assignments will emphasize computer science principles, programming, and problem-solving skills. Major topics include programming language concepts, data structures, algorithms,and secure design. This comprehensive program equips students with the knowledge, skills, and practical experience needed to excel in the dynamic and rapidly evolving field of information and computer sciences.

Program Level Student Learning Outcomes

Upon completion of this program, students will be able to:

1. Demonstrate proficiency in various programming languages, software development methodologies, and technology tools commonly used in the field of computer science.
2. Demonstrate knowledge of information systems concepts, including the design and management of information systems to support organizational goals and decision-making processes.
3. Design and implement secure software and systems, identify vulnerabilities, and implement countermeasures.
4. Design, develop, and test software applications and systems that adhere to industry standards and best practices.

Review Graduation Requirements (https://catalog.cccd.edu/coastline/graduation-requirements/certificates/#achievementtext).

Course	Title	Units
Core Courses		
Complete the following:		
ICS C120	Introduction to Programming	3
ICS C123	Fundamental Data Structures	3
ICS C141	Concepts Of Programming Languages	3
CYBR C101	Introduction to Cybersecurity	3
ICS C230	Secure Coding and Design	3
ICS C240	Computer Organization and Assembly Language	3
ICS C250	Object-Oriented Programming	3
or CIS C157	Introduction to Python Programming	
ICS C265	Introduction to Artificial Intelligence	3
Elective Units		**3**
Select one of the following:		
CIS C285	Data Governance, Privacy, and Policies	

Course	Title	Units
CIS C290	Data Science and Machine Learning	
Total Units		**27**