

# COMPUTER SCIENCE - CERTIFICATE OF ACHIEVEMENT

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**Plan Code: 3119**

This certificate prepares a student for an entry-level job in the computer software and hardware related fields by teaching them to apply the foundational skills and theory of Computer Science to various domains. This series of courses is designed to place emphasis on problem solving with a balance of skill acquisition and fundamental theory. Each CS course meets the California C-ID content standards for Computer Science.

## Program Student Learning Outcomes

- Demonstrate a knowledge of common algorithms, their performance, and what applications to use them for.
- Create computer programs with object-oriented design principles and demonstrate a solid understanding of the practice of programming.
- Articulate the basic structures of a processor and their relation to each other and performance and demonstrate an understanding of assembly language.

## Program Requirements

Code Number	Course Title	Units
<b>REQUIRED COURSES</b>		
CS 11	Introduction to Computer Science- C++	3
or CS 21	Introduction to Computer Science-Java	
or CS 31	Introduction to Computer Science-Python	
<b>Subtotal Units</b>		<b>3</b>
IN ADDITION, complete the following:		
CS 22	Data Structures and Algorithms	3
CS 51	Introduction to Computer Architecture	3
CS 61	Discrete Structures	3
MATH 60/60H	First Calculus Course	5
MATH 70/70H	Second Calculus Course	5
PHYS 3A	Physics for Sci. & Eng. - Mechanics	5.5
PHYS 3B	Physics for Sci. & Eng. - E & M	4.5
<b>Subtotal Units</b>		<b>29</b>
<b>Total Units</b>		<b>32</b>