Computer Engineering Minor
2024-2025 Curriculum Chart

Math

MATH 19A
Calculus I
Prerequisites: Math Placement score of 400 or more or Math 3

AM 20
Engr. Math Methods II
Prerequisites: Math 19B and AM 10 or Math 21

OR

MATH 24
Differential Equations
Prerequisites: Math 23A or Math 22

MATH 19B
Calculus II
Prerequisites: Math 19A

CSE 16
Applied Discrete Mathematics
Prerequisites: Math 19A or Math 19B

Physics

PHYS 5A/L or 6A/L
Mechanics
Prerequisites:
Math 19A and concurrent or previous enrollment in Math 19B

PHYS 5C/N or 6C/N
Electricity & Magnetism
Prerequisites:
Phys 5A or 6A and Math 19A and Math 19B

Lower Division Courses

CSE 20
Beginning Programming in Python

CSE 30
Programming Abstractions: Python
Prerequisites: CSE 20; and Math 19A or Math placement score of 400 ot more

CSE 12
Computer Systems & Assembly Language
Prerequisites: CSE 20 or CSE 30

CSE 13S
Computer Systems and C Programming
Prerequisites: CSE 12

OR

ECE 13
Computer Systems and C Programming
Prerequisites: CSE 12 and CSE 20 or CSE 30

Upper Division Courses

CSE 101
Intro to Data Structures and Algorithms
Prerequisites: CSE 12, CSE 16, CSE 13s or ECE 13, and CSE 30; Math 19B or 20B

CSE 100/L
Logic Design and Laboratory
Prerequisites: CSE 12

CSE 120
Computer Architecture
Prerequisites: CSE 12 and CSE 13S or ECE 13

ECE 101/L
Introduction to Electronic Circuits and Lab
Prerequisites:
Phys 5C/N or Phys 6C/N and Math 24 or concurrent or previous enrollment in AM 20

CSE 121
Embedded System Design
Prerequisites: CSE 12, CSE 100/L, CSE 13S or ECE 13, ECE 101/L. and Phys 5C/N

OR

ECE 118
Introduction to Mechatronics
Prerequisites:
ECE 101/L, CSE 100/L, and ECE 13

Computer Engineering Minor
2023-2024 Curriculum Chart

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

The computer engineering minor provides a solid foundation in digital hardware, electronics, and computer software, as well as the prerequisite material in mathematics and physics. The minor is well-suited to students who wish to take part in the design of computer and embedded systems in any discipline. Electrical and Computer Engineering 118, *Introduction to Mechatronics* or Computer Science and Engineering 121, *Embedded System Design* provides a capstone engineering design experience for students pursuing the computer engineering minor.

The prerequisites listed on this curriculum chart are accurate as of August 15, 2024 according to UCSC's general catalog. Prerequisites listed on this chart are subject to change and students should refer to the catalog for the most up to date requirements.