Computer Engineering B.S. Degree
2023-2024 Curriculum Chart

Math Courses

MATH 19A
Calculus I

MATH 19B
Calculus II

MATH 23A
Vector Calculus

or

AM 30
Multivariate Calculus for Engineers

ECE 103/L
Signals & Systems

CSE 16
Discrete Math

AM 10◊
Engr. Math Methods I
or
MATH 21
Linear Algebra

AM 20
Engr. Math Methods ll

CSE 107
Probability & Statistics

◊ Strongly recommended

Major Qualification Policy

Complete 36 units of the highlighted courses by the end of 5th quarter with at least a 2.8 GPA and no more than seven credits of non-passing grades in those courses. You do not need to complete all highlighted classes for major declaration.

Science Courses

PHYS 5A/L
Mechanics

PHYS 5C/N
Electricity & Magnetism

PHYS 5B/M
Waves & Optics

or

ECE 9
Statics and Mechanics of Materials

Core Courses

CSE 20
Beginning Programming in Python

CSE 30
Programming Abstractions: Python

CSE 100/L
Logic Design

CSE 185E▫
Technical Writing
▫ Satisfies the DC requirement

CSE 12
Computer Systems & Assembly Lang.

ECE 13
Computer Systems & C Programming
or
CSE 13S
Computer Systems & C Programming

CSE 120
Computer Architecture

CSE 101
Intro to Data Structures and Algorithms

CSE 121
Embedded System Design

ECE 101/L
Electronic Circuits

Concentrations (choose one)

System Programming

CSE 130

CSE 150

One of the following:
- **CSE 111***
- **CSE 115A**
- **CSE 134**

One of the following:
- **CSE 113**
- **CSE 156/L**
- **CSE 110A**

Elective**

Computer Systems

CSE 130

CSE 125***
or
CSE 122**

One of the following:
- **CSE 111**
- **CSE 115A**
- **CSE 134**

Elective**

Networks

CSE 130

CSE 150

CSE 156/L

Elective**

Digital Hardware

CSE 125***

ECE 171/L
or
CSE 122**

One of the following:
- **CSE 122** (if not satisfied above)
- **CSE 220**
- **CSE 228A**
- **ECE 171/L** (if not satisfied above)
- **ECE 173*****

Elective
Can be chosen from the Computer Engineering Elective list or the approved Digital Hardware Grad-Level Course List

** CSE 111 will **not** be offered during the 2023-2024 Academic Year.*
** Electives can be chosen from the Computer Engineering Elective list on the UA website.
*** ECE 173 requires the prerequisite ECE 174.
**** CSE 222A (with department approval).
***** CSE 225, Introduction to ASIC Systems Design, may be substituted for CSE 125 with department approval.

Capstone (choose one option)

CSE 123A, 123B
Eng. Design l & II

CSE129A, 129B & 129C
Capstone Project I, II, & III

CSE 115A, 115B, & 115C
Software Design Project I, II, & III

CSE 115A & 115D
Software Design Project (Accelerated)

CSE 157^
Internet of Things

ECE 118 ^
Intro to Mechatronics

CSE 195▫^^
Senior Thesis
▫ Satisfies the DC requirement

^These courses (CSE 157 & ECE 118) can NOT be used as elective and capstone. ^^CSE 195 also requires the submission of an approved senior thesis.

Computer Engineering B.S. Degree
2023-2024 Curriculum Chart

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Upper Division Electives

Please refer to the Undergraduate Advising website for the list of approved electives
Computer Engineering Electives: https://undergrad.soe.ucsc.edu/computer-engineering-electives-23-24
Digital Hardware Grad-Level Course List: https://undergrad.soe.ucsc.edu/computer-engineering-digital-hardware-electives-23-24

Notes:

- Baskin Engineering has different major declaration deadlines than the UCSC Academic/Administrative calendar. Our deadlines and process can be found on: https://undergrad.soe.ucsc.edu/current-students/declare-your-major
- All students admitted to a Baskin Engineering major, or seeking admission to a major, must take all courses required for that major for a letter grade.
- Courses in which you receive a grade of C-, D+, D, or D- earn credit toward graduation, but cannot be used to satisfy a major requirement or a general education requirement, and cannot satisfy a prerequisite for another course.
- At most, only one elective upon prior approval may be substituted by an upper-division individual or field study (CSE/ECE 193 or 198). Approval is determined by the department via Course Substitution Petition.

Student Name:

Staff Advisor: