Computer Engineering B.S. Degree
2022-2023 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 II
- **CSE 107** Probability & Statistics

** Strongly recommended*

Core Courses

- **CSE 20** Beginning Programming in Python
- **CSE 30** Programming Abstractions: Python
- **CSE 100/L** Logic Design
- **CSE 185E #** Technical Writing
- **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

 # Satisfies the DC requirement

Science Courses

- **PHYS 5A/L** Mechanics
- **PHYS 5B/M** Waves & Optics *or* **ECE 9** Statics and Mechanics of Materials
- **PHYS 5C/N** Electricity & Magnetism

Concentrations (choose one)

System Programming

- **CSE 130**
- **CSE 111** *or* **CSE 115A** *or* **CSE 134**
- **CSE 150/L**
- *One of the following:*
  - CSE 113
  - CSE 156/L
  - CSE 110A
- **CSE 151/L or Elective***

Computer Systems

- **CSE 130**
- **CSE 125** *or* **CSE 122*****
- **CSE 111** *or* **CSE 115A** *or* **CSE 134**
- **Elective***

Networks

- **CSE 150**
- **CSE 156/L**
- **CSE 130**
- **CSE 151/L** *or* **Elective***

Digital Hardware

- **CSE 125**
- **ECE 171/L** *or* **CSE 122*****
- *One of the following:*
  - CSE 122 (if not satisfied above)***
  - CSE 220
  - 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*

** 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)*

Capstone (choose one option)

- **CSE 123A, 123B** Eng. Design I & 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

$ ECE 118 only allowed as Capstone course if it is not used as an Elective

Computer Engineering B.S. Degree
2022-2023 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
Digital Hardware Grad-Level Course List: https://catalog.ucsc.edu/Current/General-Catalog/Academic-Units/Baskin-School-of-Engineering/Computer-Science-and-Engineering/Computer-Engineering-BS-Digital-Hardware-Concentration-Grad-Level-Course-List

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: