Computer Engineering B.S. Degree
2022-2023 Curriculum Chart

Math Courses
- MATH 19A Calculus I
- MATH 19B Calculus II
- MATH 23A Vector Calculus
- AM 30 Multivariate Calculus for Engineers
- CSE 107 Probability & Statistics
- CSE 16 Discrete Math
- AM 10* Engr. Math Methods I
- MATH 21 Linear Algebra
- AM 20 Engr. Math Methods II
- PHYS 5A/L Mechanics
- PHYS 5B/M Waves & Optics
- PHYS 5C/N Electricity & Magnetism
- PHYS 23A Vector Calculus
- MATH 115B, & 115D Software Design Project I, II, & III
- CSE 100/L Logic Design
- CSE 107 Probability & Statistics
- CSE 185E # Technical Writing

Core Courses
- CSE 12 Intro to Data Structures and Algorithms
- CSE 101 Embedded System Design
- CSE 120 Computer Architecture
- CSE 123A, 123B Eng. Design I & II
- CSE 129A, 129B & 129C Capstone Project I, II, & III
- CSE 115A & 115D Software Design Project (Accelerated)
- CSE 115A & 115D Software Design Project I, II, & III
- CSE 125 Programming Abstractions: Python
- CSE 125 Programming & Assembly Language
- CSE 125 Introduction to Computer Systems
- CSE 13 Computer Systems & C Programming
- CSE 13S Computer Systems & C Programming
- ECE 171/L Electronic Circuits

Science Courses
- PHYS 5A/L Mechanics
- PHYS 5B/M Waves & Optics
- PHYS 5C/N Electricity & Magnetism
- ECE 103/L Signals & Systems
- CSE 113 Probability & Statistics
- CSE 122 Intro to Data Structures and Algorithms
- ECE 103/L Signals & Systems
- CSE 156/L Elective
- CSE 157 Internet of Things
- ECE 118 $ Intro to Mechatronics
- CSE 195 Senior Thesis

Concentrations (choose one)
System Programming
- CSE 130
- CSE 111 or CSE 115A or CSE 134
- CSE 150/L

Computer Systems
- CSE 130
- CSE 125 or CSE 122***
- CSE 111 or CSE 115A or CSE 134

Networks
- CSE 150
- CSE 156/L
- CSE 130

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

* Electives can be chosen from the Computer Engineering Elective list on the UA website
** ECE 173 requires the prerequisite ECE 174
*** CSE 222-A (with department approval)

Capstone (choose one option)
- CSE 195 Senior Thesis
- ECE 118 $ Intro to Mechatronics
- CSE 123A, 123B Eng. Design I & II
- CSE 129A, 129B & 129C Capstone Project I, II, & III
- CSE 115A, 115B, & 115D Software Design Project I, II, & III
- CSE 115A & 115D Software Design Project (Accelerated)
- CSE 157 Internet of Things
- ECE 118 $ Intro to Mechatronics

# Satisfies the DC requirement

* Strongly recommended

https://undergrad.soe.ucsc.edu/ • bsoeadvising@ucsc.edu • (831) 459-5840 • 6/28/2022

$ ECE 118 only allowed as Capstone course if it is not used as an Elective
## 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](https://undergrad.soe.ucsc.edu/computer-engineering-electives)


### 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](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:

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### Staff Advisor:

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