

Computer Engineering B.S. Degree 2021-2022 Curriculum Chart

Math Courses

MATH 19A Calculus I	CSE 16 Discrete Math
MATH 19B Calculus II	AM 10* Engr. Math Methods I or MATH 21 Linear Algebra
MATH 23A Vector Calculus or AM 30 Multivariate Calculus for Engineers	AM 20 Engr. Math Methods II
ECE 103/L Signals & Systems	CSE 107 Probability & Statistics

* Strongly recommended

Core Courses

CSE 20 Beginning Programming in Python	CSE 12 Computer Systems & Assembly Lang.	CSE 101 Intro to Data Structures and Algorithms
CSE 30 Programming Abstractions: Python	ECE 13 Computer Systems & C Programming or CSE 13S Computer Systems & C Programming	CSE 121 Embedded System Design
CSE 100/L Logic Design	CSE 120 Computer Architecture	ECE 101/L Electronic Circuits
CSE 185E # Technical Writing		

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
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Concentrations (choose one)

System Programming	Computer Systems	Networks	Digital Hardware
CSE 130	CSE 130	CSE 150/L	CSE 125
CSE 111 or CSE 115A or CSE 134	CSE 125 or CSE 122***	CSE 156/L	ECE 171/L or CSE 122***
CSE 150/L	CSE 111 or CSE 115A or CSE 134	CSE 130	<i>One of the following:</i> <ul style="list-style-type: none"> • CSE 122 (if not satisfied above)*** • CSE 220 • ECE 171/L (if not satisfied above) • ECE 173/L**
<i>One of the following:</i> <ul style="list-style-type: none"> • CSE 113 • CSE 156/L • CSE 110A 	Elective*	CSE 151/L or Elective*	
CSE 151/L or Elective*	<i>* Electives can be chosen from the Computer Engineering Elective list on the UA website</i> <i>** ECE 173 requires the prerequisite ECE 174</i> <i>*** CSE 222A (with department approval)</i>		Elective <i>Can be chosen from the Computer Engineering Elective list or the approved Digital Hardware Grad-Level Course List</i>

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	Exit Requirements <ol style="list-style-type: none"> 1) Portfolio 2) Exit Survey 3) Exit Interview
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\$ ECE 118 only allowed as Capstone course if it is not used as an Elective

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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:

- The School of 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/declare-your-major>
- All students admitted to a School of 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: