**Math Courses**

**MATH 19A**  
Calculus I

**MATH 19B**  
Calculus II

**MATH 23A**  
Vector Calculus

**AM 10**  
Engr. Math Methods I

**AM 20**  
Engr. Math Methods II

**MATH 21**  
Linear Algebra

**MATH 24**  
Differential Equations

**AM 30**  
Multivariate Calculus for Engineers

**CSE 16**  
Discrete Math

* AM 10 & 20 are strongly preferred. Students who complete Math 21 & 24 (or the equivalents) in lieu of AM 10 & 20 are strongly encouraged to either take the MATLAB self-paced tutorial: [http://matlab-training.soe.ucsc.edu](http://matlab-training.soe.ucsc.edu), or ECE 8, prior to enrolling into ECE 101/L.

**Science Courses**

**PHYS 5A/L or 6A/L**  
Mechanics

**PHYS 5C/N or 6C/N**  
Electricity & Magnetism

**Core Courses**

**CSE 20**  
Intro to Prog. Python

**CSE 30**  
Prog. Abstractions: Python

**CSE 13S** or **CSE 13E**  
Computer/Embedded Systems & C Programming

**% CSE 12/L**  
Computer Systems & Assembly Lang.

**% CSE 135/L**  
Intro to Computer Networks

**% CSE 185E**  
Technical Writing

**% CSE 100/L**  
Logic Design

**% CSE 101**  
Algorithms & Abstract Data Types

**% ECE 101/L**  
Electronic Circuits

# Satisfies the DC requirement.

**Electives**

Choose from Approved List of Upper Division Electives that can be found at: [https://undergrad.soe.ucsc.edu/curriculum-charts/ndt-electives](https://undergrad.soe.ucsc.edu/curriculum-charts/ndt-electives)

1. ____________________  
2. ____________________  
3. ____________________

* Check catalog/SoE course descriptions for prerequisites

% Students with no prior programming experience are strongly recommended to take course CSE 20, CSE 10, or equivalent before taking this class.

**Capstone**

Students must pass one of the below capstone courses, in addition to the three upper-division electives.

**CSE 115A**  
Software Engineering

**CSE 118/L**  
Intro to Mechatronics

**CSE 121/L**  
Microprocessor System Design

**CSE 125/L**  
Logic Design with Verilog

**CSE 156/L**  
Network Programming

**Exit Requirements**

1. Portfolio  
   [https://www.soe.ucsc.edu/departments/computer-engineering/undergraduate/undergraduate-portfolio](https://www.soe.ucsc.edu/departments/computer-engineering/undergraduate/undergraduate-portfolio)
2. Exit Survey  
   [https://undergrad.soe.ucsc.edu/exit-survey](https://undergrad.soe.ucsc.edu/exit-survey)
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**Elective Choices** [https://undergrad.soe.ucsc.edu/curriculum-charts/ndt-electives](https://undergrad.soe.ucsc.edu/curriculum-charts/ndt-electives)

Students wishing to focus on digital technology should consider including among their courses: CSE 120, CSE 121/L, CSE 125/L, ECE 101/L, ECE 118/L

Students wishing to focus on network technology should consider including among their courses: CSE 101, CSE 130*, CSE 131*, CSE 151/L, and CSE 156/L

In all cases, students should discuss their interests and elective choices with a faculty adviser.

*Students can only use either CSE 130 or CSE 131 to satisfy an elective.*

**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](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 may be substituted by an upper-division individual or field study (CSE, ECE 193 or 198) with approval. Approval is determined by the department via Course Substitution Petition.

- A single course may not satisfy multiple major requirements.

**Student Name:**

**Staff Advisor:**

**Faculty Advisor:**

[https://undergrad.soe.ucsc.edu/](https://undergrad.soe.ucsc.edu/) • advising@soe.ucsc.edu • (831) 459-5840 • 07/19/2019