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

Math Courses

- **MATH 19A**
  - Calculus I
- **MATH 19B**
  - Calculus II
- **MATH 23A**
  - Vector Calculus
- **AM 30**
  - Multivariate Calculus for Engineers
- **AM 10**
  - Engr. Math Methods I
- **MATH 21**
  - Linear Algebra
- **MATH 20**
  - Engr. Math Methods II
- **CSE 16**
  - Discrete Math
- **CSE 107**
  - Probability & Statistics
- **ECE 103/L**
  - Signals & Systems
- **ECE 10**
  - Intro to Mechatronics
- **ECE 167**
  - Sensing & Sensor Technologies
- **ECE 118**
  - Intro to Mechatronics
- **ECE 141**
  - Feedback Control Systems

Programming

- **CSE 12**
  - Computer Systems & Assembly Language
- **CSE 13**
  - Computer Systems & C Programming
- **CSE 20**
  - Beginning Programming in Python
- **CSE 101**
  - Introduction to Data Structures and Algorithms
- **CSE 30**
  - Programming Abstractions: Python
- **ECE 129A, 129B, & 129C**
  - Capstone Project I, II, & III
- **ECE 129A**
  - Capstone Project I
  - **ECE 195** (10 credits)
  - Senior Thesis Research

Science Courses

- **PHYS 5A/L**
  - Mechanics
- **ECE 9**
  - Statics and Mechanics of Materials
- **PHYS 5C/N**
  - Electricity & Magnetism
- **ECE 10**
  - Fundamentals of Robot Kinematics & Dynamics

Digital Electronics

- **CSE 100/L**
  - Logic Design
- **ECE 101/L**
  - Electronic Circuits
- **ECE 121**
  - Microcontroller System Design

Robotics

- **ECE 118**
  - Intro to Mechatronics
- **ECE 141**
  - Feedback Control Systems

Electives

- **Advanced Robotics Elective**

Capstone (choose one option)

- **ECE 129A, 129B, & 129C**
  - Capstone Project I, II, & III

Exit Requirements

1. Portfolio
   - [https://engineering.ucsc.edu/departments/electrical-and-computer-engineering/robotics-engineering-bs-portfolio](https://engineering.ucsc.edu/departments/electrical-and-computer-engineering/robotics-engineering-bs-portfolio)
2. Exit Survey
   - [https://undergrad.soe.ucsc.edu/current-students/graduating-seniors/exit-survey](https://undergrad.soe.ucsc.edu/current-students/graduating-seniors/exit-survey)
3. Exit Interview

https://undergrad.soe.ucsc.edu • bsoeadvising@ucsc.edu • (831) 459-5840 • 9/1/2023
## Robotics Engineering B.S. Degree
### 2023-2024 Curriculum Chart

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**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.

**Student Name:**

**Staff Advisor:**