Robotics 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

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

ECE 103/L
Signals & Systems

^Strongly recommended

Programming

CSE 12
Computer Systems & Assembly Language

CSE 20
Beginning Programming in Python

ECE 13
Computer Systems & C Programming

CSE 30
Programming Abstractions: Python

CSE 101
Introduction to Data Structures and Algorithms

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 167
Sensing & Sensor Technologies

ECE 141
Feedback Control Systems

Electives

Advanced Robotics Elective*

Elective**

** Please refer to the UA website for the list of approved courses for the Adv. Robotics elective*

***Please refer to the UA website for the list of approved courses for this elective requirement*

Capstone (choose one option)#

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

ECE 129A
Capstone Project 1
&
ECE 195 (10 credits)
Senior Thesis Research

The Disciplinary Communication requirement (DC) is satisfied by completing one of the capstone options.

Exit Requirements

1. 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-1
3. Exit Interview

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Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

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.

Student Name:

Staff Advisor: