

Robotics Engineering B.S. Degree 2021-2022 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
&
ECE 195 (10 credits)**
Senior Thesis

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/exit-survey>
3. Exit Interview

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Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Approved List of Upper Division Electives

Please refer to the Undergraduate Advising website for the list of approved electives

Non Advanced Robotics Engineering Electives: <https://undergrad.soe.ucsc.edu/non-advanced-robotics-engineering-electives>

Advanced Robotics Electives: <https://undergrad.soe.ucsc.edu/advanced-robotics-electives>

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: