

Robotics Engineering B.S. Degree 2019-2020 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/L
Computer Systems
& Assembly
Language

CSE 20
Beginning
Programming in
Python

CSE 13E
Embedded Systems
& C Programming

CSE 30
Programming
Abstractions: Python

CSE 101
Algorithms & Abstract
Data Types

Science Courses

PHYS 5A/L
Mechanics

ECE 9
Intro. to Statics,
Dynamics &
Biomechanics

PHYS 5C/N
Electricity &
Magnetism

ECE 10
Fundamentals of
Robot Kinematics &
Dynamics

Digital Electronics

CSE 100/L
Logic Design

ECE 101/L
Electronic Circuits

CSE 121/L
Microprocessor
System Design

Robotics

ECE 118/L
Intro to Mechatronics

ECE 167/L
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
&
CMPE 195: Senior Thesis (10 credits)**

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

Exit Requirements

1. Portfolio <https://www.soe.ucsc.edu/departments/computer-engineering/undergraduate/undergraduate-portfolio>
2. Exit Survey <https://ua.soe.ucsc.edu/exit-survey>
3. Exit Interview

Robotics Engineering B.S. Degree 2019-2020 Curriculum Chart

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 courses

Approved List of Advanced Robotic Electives

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

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://ua.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.
- In addition to this list, any 5-unit CSE or ECE graduate course (200+) may also be used as an elective.
- At most, only one elective may be substituted by an upper-division individual or field study (CSE, ECE 193 or 198) with approval from the undergraduate director.

Student Name:

Staff Advisor:

Faculty Advisor:

I have discussed the BS/MS program with my advisor.