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

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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://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.