

# Robotics Engineering B.S. Degree 2018-2019 Curriculum Chart

## Math Courses

**MATH 19A**  
Calculus I

**MATH 19B**  
Calculus II

**MATH 23A**  
Multivariable  
Calculus

**CMPE 16**  
Discrete Math

**AMS 10\***  
Engr. Math  
Methods I  
or  
**MATH 21**  
Linear Algebra

**AMS 20**  
Engr. Math  
Methods II

**CMPE 107**  
Probability &  
Statistics

**EE 103/L**  
Signals &  
Systems

*\* Strongly recommended*

## Programming

**CMPE 12/L**  
Computer Systems &  
Assembly Language

**CMPE 13/L**  
Computer Systems &  
C Programming

**CMPS 12B/M**  
Data Structures

**CMPS 101**  
Abstract Data Types  
& Algorithms

## Science Courses

**PHYS 5A/L**  
Mechanics

**CMPE 9**  
Intro. to Statics,  
Dynamics &  
Biomechanics

**PHYS 5C/N**  
Electricity & Magnetism

**CMPE 10**  
Fundamentals of Robot  
Kinematics &  
Dynamics

## Digital Electronics

**CMPE 100/L**  
Logic Design

**EE 101/L**  
Electronic Circuits

**CMPE 121/L**  
Microprocessor  
System Design

## Robotics

**CMPE 118/L**  
Intro to Mechatronics

**Advanced Robotics  
Elective**

**CMPE 141**  
Feedback Control  
Systems

**CMPE 167/L**  
Sensing & Sensor  
Technologies

## Breadth

**CMPE 185#**  
Technical Writing

**Elective\***

*\* Electives can be an upper division  
or graduate course from Approved  
List on the UA website  
# Satisfies the DC requirement*

## Capstone (choose one option)

**CMPE 123A & 123B**  
Capstone Project I & II

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

**CMPE 195**  
Senior Thesis

## Exit Requirements

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

## Robotics Engineering B.S. Degree 2018-2019 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.soc.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 CE, CS, or EE 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 (CMPE, CMPS, EE 193 or 198) with approval.

Student Name:

Staff Advisor:

Faculty Advisor:

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