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

Elective Requirements:
In addition to the above, Electrical Engineering majors must complete 4 additional upper-division courses (minimum of 3 courses from one track). Unlisted graduate-level courses may be used to fulfill an elective requirement with prior department approval. Most, if not all, elective courses have additional pre-requisites. They are subject to change frequently. Please visit [http://courses.soc.ucsc.edu/](http://courses.soc.ucsc.edu/) to ensure you have met them.

**Communications, Signals, Systems & Controls**
- ECE 118/L Intro to Mechatronics
- ECE 130/L / 230 Intro to Optoelectronics & Photonics
- ECE 136 Engineering Electromagnetics *(Strongly Recommended)*
- ECE 141 / 241 Feedback Control Systems
- ECE 152 / 252 Intro to Wireless Communications
- ECE 153 / 250 Digital Signal Processing
- ECE 237 Image Processing and Reconstruction
- ECE 251 Principles of Digital Communications
- ECE 253 Introduction to Information Theory
- ECE 255 Error Control Coding
- ECE 256 Statistical Signal Processing
- CSE 150/L Intro Computer Networks

**Electronics & Optics**
- ECE 104 Bioelectronics
- ECE 115 Introduction to Solid Mechanics
- ECE 118/L Intro to Mechatronics
- ECE 130/L / 230 Intro to Optoelectronics & Photonics
- ECE 136 Engineering Electromagnetics
- ECE 141 / 241 Feedback Control Systems
- ECE 157/L RF Hardware Design/Lab
- ECE 167/L Sensing and Sensor Technologies
- ECE 172 / 221 Advanced Analog Integrated Circuits
- ECE 173/L High Speed Digital Design
- ECE 175/L Energy Generation and Control
- ECE 176/L Energy Conversion and Control
- ECE 177/L Power Electronics
- ECE 178 Device Electronics
- ECE 180J Advanced Renewable Energy Sources
- ECE 201 Introduction to Nanotechnology
- ECE 203 Nanocharacterization of Materials
- ECE 231 Optical Electronics
- CSE 121/L Microprocessor System Design

**Senior Design Project**
(Choose ECE129BC or ECE 129A & ECE 195):

- **ECE 129A** Engineering Design Project I
  (ECE 171, CSE100 and one of the following: ECE157/L, ECE 118/L, CSE 121/L or instructor permission)
- **ECE 129B** Engineering Design Project II
  (ECE 129A)
- **ECE 129C** Engineering Design Project III
  (ECE 129B)
- **ECE 195** Senior Thesis
  (ECE 129A) (10 units, & students must take ECE157/L or ECE118/L or ECE 115 to fulfill design experience)

**Exit Requirements:**
1. Exit Survey [https://undergrad.soe.ucsc.edu/exit-survey](https://undergrad.soe.ucsc.edu/exit-survey)
2. Exit Interview with a designated ECE faculty
3. Maintain a 2.5 cumulative GPA in all required and elective courses for the major, OR submit a Portfolio for Department Review, OR submit a Senior Thesis with department approval.

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# Electrical Engineering B.S. Degree
## 2019-2020 Curriculum Chart

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**Key Legend**
- ● Course Prerequisite
- % Students with no prior programming experience are strongly recommended to take course CSE 3, CSE 5J, CSE 20, CSE 10 or equivalent before taking this class.
- ** Requires additional pre-requisites
- ^ This course is waived for Transfer students.
- ∞ AM 10 can be substituted by MATH 21. AM 20 can be substituted by MATH 24.

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Student Name: 

Staff Advisor: 

Faculty Advisor: 

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