

## 2018-2019 ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

Students must **pick one Depth** to complete the EE Major requirements.

Due to six different college requirements, only **major** requirements are listed below. Students must speak to their college advisor for questions regarding General Education requirements.

ALL courses used to satisfy major requirements must be taken for **a letter grade and passed with a C- or better**.

### ELECTRONIC CIRCUITS AND SYSTEMS

#### Lower Division Courses [72 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C-D  
CHEM 6A  
ECE 5, 15, 25, 30, 35, 45, 65

#### Upper Division Courses [68 units]

**Breadth:** ECE 100, 101, 102, 103, 107, 109  
**Depth:** ECE 164, 165, 166  
**Technical Electives:** five upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111, 115, 140B, 190, or 191

### ELECTRONIC DEVICES AND MATERIALS

#### Lower Division Courses [72 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C-D  
CHEM 6A  
ECE 5, 15, 25, 30, 35, 45, 65

#### Upper Division Courses [68 units]

**Breadth:** ECE 100, 101, 102, 103, 107, 109  
**Depth:** ECE 135A-B, 136L, 183  
**Technical Electives:** four upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111, 115, 140B, 190, or 191

### PHOTONICS

#### Lower Division Courses [72 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C-D  
CHEM 6A  
ECE 5, 15, 25, 30, 35, 45, 65

#### Upper Division Courses [68 units]

**Breadth:** ECE 100, 101, 103, 107, 109  
**Depth:** ECE 181, 182, 183 and either ECE 184 or 185  
**Technical Electives:** five upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111, 115, 140B, 190, or 191

**2018-2019 DEPTH REQUIREMENTS CONTINUED ON NEXT PAGE →**

## COMMUNICATION SYSTEMS

### Lower Division Courses [68 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C  
CHEM 6A  
ECE 5, 15, 25, 30, 35, 45, 65

### Upper Division Courses [72 units]

**Breadth:** ECE 100, 101, 102, 107, 109  
**Depth:** ECE 153, 154A-B-C, 158A  
**Technical Electives:** five upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111, 115, 140B, 190, or 191

## MACHINE LEARNING AND CONTROLS

### Lower Division Courses [68 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C  
CHEM 6A  
ECE 5, 15, 25, 30, 35, 45, 65

### Upper Division Courses [72 units]

**Breadth:** ECE 100, 101, 107, 109  
**Depth:** ECE 171A, 174, 175A and one of ECE 171B, 172A, or 175B  
**Technical Electives:** seven upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111, 115, 140B, 190, or 191

## SIGNAL AND IMAGE PROCESSING

### Lower Division Courses [68 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C  
CHEM 6A  
ECE 5, 15, 25, 30, 35, 45, 65

### Upper Division Courses [72 units]

**Breadth:** ECE 100, 101, 107, 109  
**Depth:** ECE 153, 161A-B-C  
**Technical Electives:** seven upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111, 115, 140B, 190, or 191

## COMPUTER SYSTEM DESIGN

### Lower Division Courses [72 units]

MATH 18, 20A-B-C-D-E  
PHYS 2A-B-C  
CHEM 6A  
ECE 5, 15, 16, 25, 30, 35, 45, 65

### Upper Division Courses [68 units]

**Breadth:** ECE 100, 101, 109  
**Depth:** any five of ECE 102, 103, 111\*, 140A-B, 141A-B, 143, 158A, 158B or 165  
**Technical Electives:** six upper division engineering, math, or physics courses  
**Professional Electives:** two upper division courses  
**Design:** one of ECE 111\*, 115, 140B, 190, or 191

*\*ECE 111 MUST be taken as either a depthtechnical elective, or design course*