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

2019-2020 DEPTH REQUIREMENTS CONTINUED ON NEXT PAGE →
## Communication Systems

### Lower Division Courses [72 units]
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 17, 25, 30, 35, 45, 65

### Upper Division Courses [68 units]
- **Breadth:** ECE 100, 101, 102, 107, 109
- **Depth:** ECE 153, 155, 157A, 158A, 159
- **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

## Machine Learning and Controls

### Lower Division Courses [72 units]
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 17, 25, 30, 35, 45, 65

### Upper Division Courses [68 units]
- **Breadth:** ECE 100, 101, 107, 109
- **Depth:** ECE 171A, 174, 175A and one of ECE 171B, 172A, or 175B
- **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

## Signal and Image Processing

### Lower Division Courses [72 units]
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 17, 25, 30, 35, 45, 65

### Upper Division Courses [68 units]
- **Breadth:** ECE 100, 101, 107, 109
- **Depth:** ECE 153, 161A-B-C
- **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

## Computer System Design

### Lower Division Courses [76 units]
- MATH 18, 20A-B-C-D-E
- PHYS 2A-B-C
- CHEM 6A
- ECE 5, 15, 16, 17, 25, 30, 35, 45, 65

### Upper Division Courses [64 units]
- **Breadth:** ECE 100, 101, 109
- **Depth:** Any five of ECE 102, 103, 111*, 140A-B, 141A-B, 143, 158A-B, or 165
- **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

*ECE 111 MUST be taken as either a depth, tech. Elective or design course