

ELECTRICAL ENGINEERING

MAJOR REQUIREMENTS

2017-18

ELECTRICAL AND COMPUTER ENGINEERING STUDENT AFFAIRS OFFICE | JACOBS HALL 2701 & 2702 | ECE.UCSD.EDU

- ▶ Due to six different college requirements, only **major** requirements are listed below. Students must contact their college advisors for questions regarding General Education and University of California requirements.
- ▶ ALL courses used to satisfy major requirements must be taken for a **letter grade and passed with a C– or better.**

COMMUNICATION SYSTEMS

Lower Division (72 units)

MATH 18, 20A, 20B, 20C, 20D, 20E

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper Division (68 units)

Breadth:

ECE 100, 101, 102, 107, 109

Depth:

ECE 153, 154A-B-C, 158A

Technical Electives:

four upper-division engineering, math, or physics courses

Professional Electives:

two upper-division courses

Design Course:

one of ECE 111, 190, or 191

COMPUTER SYSTEM DESIGN

Lower Division (72 units)

MATH 18, 20A, 20B, 20C, 20D, 20E

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper division (68 units)

Breadth:

ECE 100, 101, 102, 103, 109

Depth:

CSE 141, ECE 165 and two of ECE 111, 158A or CSE 143

Technical Electives:

five upper-division engineering, math, or physics courses

Professional Electives:

two upper-division courses

Design:

one of ECE 111 (if not selected as a Depth course), 190, or 191

ELECTRONIC CIRCUITS & SYSTEMS

Lower Division (72 units)

MATH 18, 20A, 20B, 20C, 20D, 20E

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper Division (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, 190, or 191

ELECTRICAL ENGINEERING MAJOR REQUIREMENTS

2017-18

ELECTRONIC DEVICES & MATERIALS

Lower Division (72 units)

**MATH 18, 20A, 20B, 20C, 20D,
and 20E**

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper Division (68 units)

Breadth:

**ECE 100, 101, 102, 103, 107,
and 109**

Depth:

ECE 135A-B, 136L, 183

Technical Electives:

**four upper-division engineer-
ing, math, or**

physics courses

Professional Electives:

two upper-division courses

Design:

one of ECE 111, 190, or 191

MACHINE LEARNING & CONTROLS

Lower Division (72 units)

**MATH 18, 20A, 20B, 20C, 20D,
and 20E**

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper Division (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, 190, or 191

PHOTONICS

Lower Division (72 units)

**MATH 18, 20A, 20B, 20C, 20D,
and 20E**

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper Division (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 engineer-
ing, math, or physics courses**

Professional Electives:

two upper-division courses

Design:

one of ECE 111, 190, or 191

SIGNAL & IMAGE PROCESSING

Lower Division (72 units)

**MATH 18, 20A, 20B, 20C, 20D,
and 20E**

PHYS 2A, 2B, 2C, 2D

CHEM 6A

ECE 5, 15, 25, 30, 35, 45, 65

Upper Division (68 units)

Breadth:

ECE 100, 101, 107, 109

Depth:

ECE 153, 161A, 161B, 161C

Technical Electives:

**six upper-division engineering,
math, or physics courses**

Professional Electives:

two upper-division courses

Design:

one of ECE 111, 190, or 191