PROGRAM DESCRIPTION

As the leader in practical, hands-on electrical engineering education, Cal Poly develops industry-ready talent that advances the technical world by innovating from fundamentals to advanced technologies. The Electrical Engineering Department is fully committed to a Learn by Doing educational experience.

First-year students study computer programming and electric circuit analysis. Sophomore students learn about analog and digital circuit design and build their own computer and interface hardware using FPGAs. Integrated circuit designs, microprocessor applications, control systems, communication systems and signal processing highlight the junior year. Seniors take technical electives such as utility power networks, alternative energy systems, power electronics, electronic communication systems, advanced computer design and interfacing, digital control systems, digital signal and image processing, high-frequency electronic design, photonics and biomedical applications.

ASSOCIATED CLUBS

- Amateur Radio Club — w6bhz.org
- Audio Engineering Society — calpolyaudio.club
- Cal Poly Club Services Page (Engineering) — clubs.calpoly.edu
- Cal Poly Robotics Club — calpolyrobotics.com
- Electric Vehicle Engineering Club — evec.calpoly.edu
- Eta Kappa Nu — web.calpoly.edu/~hkn
- IEEE Consumer Electronics Society — ieeusa.org
- IEEE Student Branch — calpolyieee.com
- Power Engineering Society — web.calpoly.edu/~pesclub
- Renewable Energy Club — web.calpoly.edu/~reccclub
- Society of Women Engineers — swe.calpoly.edu
- Women Involved in Software & Hardware (WISH) — calpoly.edu/~wish

U.S. News and World Report ranked Cal Poly electrical engineering as the No. 2 undergraduate program in the nation among all non-Ph.D.-granting universities in 2020.

ELECTRICAL ENGINEERING GRADUATES

Electrical engineering graduates work for a variety of industries, including electrical components and computer equipment manufacturers; medical and scientific instruments; transportation, communication, and computer-related sectors; the federal government; electric utility companies; and engineering consulting firms.
### B.S. in Electrical Engineering

**Suggested Four-Year Academic Flowchart - 2022-2026 Catalog**

### Freshman Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus I</td>
<td>MATH 141 (4)</td>
</tr>
<tr>
<td>MATH 142 (4)</td>
<td>MATH 143 (4)</td>
</tr>
</tbody>
</table>

**Notes:**
- Can be taken anytime during Freshman Year.
- Calculus I and/or Calculus II can be taken concurrently.

### Sophomore Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus II</td>
<td>MATH 142 (4)</td>
</tr>
<tr>
<td>MATH 143 (4)</td>
<td>MATH 144 (4)</td>
</tr>
</tbody>
</table>

**Notes:**
- Calculus II and/or Calculus III can be taken concurrently.
- Calculus II and/or Calculus III can be taken anytime during Freshman Year.

### Junior Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Analysis I</td>
<td>MATH 244 (4)</td>
</tr>
<tr>
<td>MATH 241 (4)</td>
<td>MATH 242 (4)</td>
</tr>
</tbody>
</table>

**Notes:**
- Linear Analysis I and/or Calculus IV can be taken anytime during Junior Year.

### Senior Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus IV</td>
<td>MATH 241 (4)</td>
</tr>
<tr>
<td>MATH 242 (4)</td>
<td>MATH 243 (4)</td>
</tr>
</tbody>
</table>

**Notes:**
- Calculus IV and/or Modern Physics I can be taken anytime during Senior Year.

### General Education Courses

**Notes:**
- MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET
- * Refer to current catalog for prerequisites.
- ** One course from each of the following GE areas must be completed: A1, A2, A3, C1, C2, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, Lower-Division E, and F. Upper-Division C should be taken only after Junior standing is reached (90 units).
- *** Refer to current catalog for course selection.

### Upper-Division Electives

- * Either the ENGR 459, ENGR 460, and ENGR 465 (6) series or the ENGR 463, ENGR 464, and ENGR 465 (6) series may substitute for the EE 460, EE 461, and EE 462 (6) series or the EE 460, EE 463, and EE 464 (6) series.
- † See catalog for course options. Consultation with advisor is recommended prior to selecting Technical Electives or Approved Electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals. No course credits may be used simultaneously to satisfy both Approved Engineering Elective and Technical Elective requirements.
- ** Four Transfer students take EE 112 (2) & IME 156 (2) or EE 112 (2) & EE 143 (1) & one additional unit of Free Elective.
- † † Studies and/or goals. No course credits may be used simultaneously to satisfy both Approved Engineering Elective and Technical Elective requirements.
- USCP requirement can be satisfied by some (but not all) courses within GE categories: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

### Graduation Writing Requirement

**Notes:**
- (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)
- * Refer to current catalog for prerequisites.

### Total Units

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