PROGRAM DESCRIPTION

Industrial engineering is the profession concerned with solving problems associated with integrated systems of people, material, information, equipment and energy. Industrial engineers design, analyze and improve these systems by applying tools of mathematics, physical science, social science, computing and business. They model and analyze the operations of organizations that create and deliver goods and services in order to improve efficiency, reduce wasted time and effort, identify bottlenecks and improve quality. Industrial engineers are systems thinkers who consider the impact of any improvements or design changes on people, community, economics and the environment.

OUR MISSION

To inspire and educate students for successful careers as engineering professionals using a Learn by Doing approach that develops students’ abilities to design and implement innovative, effective solutions for improving processes and systems in society, business and industry.

INDUSTRIAL ENGINEERING GRADUATES

Although some Cal Poly industrial engineering graduates go on to graduate school or MBA programs, most are recruited by industry.

ASSOCIATED CLUBS

- Alpha Pi Mu Honor Society — alphapimu.com
- American Production and Inventory Control Society — apics.org
- Engineers Without Borders — ewb.calpoly.edu
- Institute of Industrial Systems Engineers — facebook.com/CalPolyIIE
- RFID (Radio Frequency Identification) Club — polygart.calpoly.edu/rfid-club
- Sales Engineering Club — calpolysec.org
- Society of Manufacturing Engineers — sme.org
- Society of Women Engineers — swe.calpoly.edu
- Systems Optimization Club — cpsoc.wordpress.com
- Women Involved in Software & Hardware (WISH) — calpoly.edu/~wish

### B.S. in Industrial Engineering

**Suggested Four-year Academic Flowchart • 2022-2026 Catalog**

#### FRESHMAN

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro to IME 101 (1)</td>
<td>Mfg. Proc. Net Shape 141 (1)</td>
</tr>
</tbody>
</table>

**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, C1, C2, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, and F. Upper-Division C should be taken only after Junior standing is reached (90 units).
- Refer to online catalog for GE course selection.
- Refer to online catalog for GE course selection. Consultation with advisor recommended prior to selecting courses. Courses may not be used to satisfy other major, support, or general education requirements (no double counting of coursework).

#### SOPHOMORE

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Improvement Fundamentals 156 (2)</td>
<td>Basic Electronics Manufacturing 223 (4)</td>
</tr>
</tbody>
</table>

**Notes:**

13 units Technical Electives required. Select from Category A (8-13 units) & B (0-5 units). See catalog for course options. Consultation with advisor recommended prior to selecting courses. Courses may not be used to satisfy other major, support, or general education requirements (no double counting of coursework).

#### JUNIOR

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Decision Making for Engineers 315 (3)</td>
<td>Operations Research I 301 (4)</td>
</tr>
</tbody>
</table>

**Notes:**

Choose two of the three optional courses for a total of 6 units.

#### SENIOR

<table>
<thead>
<tr>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications of Enterprise Engineering 372 (4)</td>
<td>Operations Research II 305 (4)</td>
</tr>
</tbody>
</table>

**Notes:**

1 Excess unit from CPE/CSC 101 can count as Category B technical elective.

---

**Legend:**

- **Course Title**: Major (81-82)
- **Course # (Units)**: Support (72-73)
- **GE Area**: General Ed. (36)