

# Areas students choose to focus on:

- Human Factors & Ergonomics
- Operations Research
- Simulation
- Quality Engineering & 6 Sigma
- Facilities Planning & Design
- Sustainability
- Process Improvement & Lean
- Systems Engineering

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Students are encouraged to review admissions and curriculum requirements in the Cal Poly Catalog or at the following websites:

Curriculum Requirements <a href="http://.catalog.calpoly.edu">http://.catalog.calpoly.edu</a>

Cal Poly Admissions http://admissions.calpoly.edu/

CENG Advising Center http://eadvise.calpoly.edu

California Polytechnic State University

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# Industrial **Engineering**

### **Industrial Engineering**

Is the profession concerned with designing and improving business operations. They apply math, science, and technology to improve efficiency and quality in organizations, with special consideration for the human element.

Graduates in industrial engineering are career-ready engineers prepared for:

- Immediate entry into their field, based on hands-on experience.
- Success as engineering professionals based on a solid grounding in the fundamentals.
- Long-term career success based on a well-rounded education.
- A life-long pursuit of learning.

### **Career Opportunities**

The B.S. Industrial Engineering degree opens the door to many attractive career options in numerous industries (e.g., aerospace, automotive, biomedical, consulting, energy, entertainment, food & manufacturing). Sample positions accepted include management analyst, production engineer/manager, quality engineer, reliability engineer, sales, systems engineer, and project manager.

Graduates are also well prepared for successful graduate study. Currently the IME Department offers masters degrees in Industrial Engineering (IE) and Integrated Technology Management (ITM), and (jointly with the College of Business) the Engineering Management Program (EMP). The focus of each of these programs can be tailored to best fit the individual needs of an industrial engineer.

### **B.S. IE Curriculum**

The curriculum emphasis is based upon the application of basic knowledge of math, physical, and social sciences. The curriculum objectives are to improve the quality and productivity of creating and delivering goods and services and to act as the interface between technology and humans.

# **Computing Environment**

Department and university laboratories and equipment, including computers and software, as well as industry projects, are integrated into coursework throughout the curriculum to investigate, test, and apply theoretical principles learned in the classroom.

## **Project Experience**

Due to their unique experiences in their classes and laboratories, industrial engineers serve as valuable team members for projects across the college and university such as:

Material Handling Design Comp.
Engineers Without Borders
PolyHouse Project Management
RFID Inventory Management System
Sustainability Projects
Lead-Free Solder Joint Reliability
LED Project
Brick-Press Development for Zambia
SAE Baja Competition
Warehouse & Supply Chain
Lean Operations Improvement
Six Sigma Quality

### **Student Organizations**

The department has active student chapters of the Institute of Industrial Engineers (IIE), Society of Manufacturing Engineers (SME), Society of Women Engineers (SWE), Association of Facility Engineers (AFE), Sales Engineering (SEC) and Engineers Without Borders (EWB). Student teams compete in national competitions and student organizations sponsor industry/student events.

Industrial Engineering program accredited by the Engineering Accreditation Commission of ABET <a href="http://www.abet.org">http://www.abet.org</a>