INTRODUCTION TO THE MAJOR

Industrial engineers find the most effective and efficient way to use basic factors of production—people, machines, materials, information, and energy—to make a product or provide a service. In Industrial Engineering and Operations Research (IEOR), we invent, analyze and teach tools and approaches for design, analysis, risk management, and decision-making in complex real-world systems like supply chains, energy systems, healthcare systems, and financial systems.

The department offers a major accredited by the Engineering Accreditation Commission of ABET. A minor in IEOR is available, as well as an Operations Research and Management Science major in the College of Letters & Science.

THE IEOR CURRICULUM

The core of the IEOR program includes basic science, mathematics including probability and statistics, engineering optimization, and stochastic models. This forms the methodological foundation for upper division IEOR electives involving the analysis and design of production and service systems, information systems, and human work systems and organization, among others.

AMPLIFY YOUR MAJOR

- Join an Engineering student group such as the Institute of Industrial Systems Engineers or Alpha Pi Mu
- Take a Challenge Lab course such as IEOR 185
- Enrich your studies with the Sutardja Certificate in Entrepreneurship and Technology
- Build your skills with electives such as IEOR 142: Introduction to Machine Learning and Data Analytics or IEOR 150: Production Systems Analysis.

“This world is full of challenges, and with an IEOR education I can tackle many—if not all—of them.”

Jenny Cortez, IEOR Class of 2018
## DESIGN YOUR JOURNEY

### SECOND YEAR

**INDUSTRIAL ENGINEERING AND YOUR FUTURE**

1. **Reflect**
   - Talk to ESS peer advisors about life in the major.
   - Meet with your ESS advisor to discuss your academic progress and any challenges.
   - Complete lower division prerequisites and start planning your upper division courses.
   - Plan for a double major, simultaneous degree, minor, or study abroad.

2. **Discover**
   - Explore entrepreneurship through the Sutardja Beehive.
   - Consider a 4th-year project-based class.
   - Complete any “bucket list” courses and remaining major, college, and campus requirements.
   - Attend a career fair.

3. **Explore**
   - Explore Engineering Library.
   - Meet with your ESS peer advisor.
   - Take advantage of tutoring and workshops for Engineering students at the Center for Access to Engineering Excellence.
   - Visit the Office of Undergraduate Research and Scholarships.

4. **Connect and build community**
   - Attend the Freshman Seminar or DeCal course.
   - Explore Engineering student organizations.
   - Broaden your perspective by attending Newton Series or View from the Top lectures.
   - Join Engineering student groups such as the Institute of Industrial Systems Engineers.

### THIRD YEAR

**YOUR MAJOR**

1. **Reflect**
   - Talk to ESS peer advisors about life in the major.
   - Meet with your ESS advisor to discuss your academic progress and any challenges.

2. **Discover**
   - Consider applying for a research opportunity for Engineering and EIEOR students.
   - Consider pursuing a research opportunity for EIEOR students.
   - Consider giving back by becoming an ESS peer advisor.

3. **Explore**
   - Explore Engineering Library.
   - Explore the Sutardja Center and Skydeck.
   - Explore entrepreneurship through the Sutardja Certificate in Entrepreneurship and Technology.
   - Explore your intended mission and impact as an Engineer.

4. **Connect and build community**
   - Join a professional association related to your interests.
   - Connect with alumni groups and leverage your network as you prepare to graduate.
   - Follow up with your past professors and ask what you can do to help them as an EIEOR alumni.

### FOURTH YEAR

**YOUR MAJOR**

1. **Reflect**
   - Think about which industries interest you (supply chains, healthcare, semiconductors, transportation).
   - Consider becoming an instructor for ENGIN 98.

2. **Discover**
   - Learn how to be an ethical and inclusive global leader through the LeaderShape Institute.
   - Explore your intended mission and impact as an Engineer.

3. **Explore**
   - Apply for a research opportunity if you haven’t done so already.
   - Check out design and maker opportunities at the Berkeley Engineering Library.
   - Explore Engineering Libraries.
   - Explore careers through Employer Info Sessions.

4. **Connect and build community**
   - Follow up with your past professors and ask what you can do to help them as an EIEOR alumni.
   - Connect with alumni groups and leverage your network as you prepare to graduate.
   - Follow up with your past professors and ask what you can do to help them as an EIEOR alumni.

### WHAT CAN I DO WITH MY MAJOR?

The EIEOR major prepares students for technical careers in production or service industries. It provides a strong foundation for those headed for engineering management positions or for those intending to go on to specialized graduate study in operations research, industrial engineering, or business administration.

### Jobs and Employers

- **Analyst Consultant, Goldman Sachs Asst.**
  - Baseball R&D, Tampa Bay Rays

- **DeCal course**
  - Data Analyst, Sweetgreen
  - Data Engineer, Bechtel
  - Finance Associate, Quicken Loans
  - Industrial Engineer, SpaceX
  - IT Project Management, Quicken Loans
  - Product Manager, SAP
  - Research Analyst, Hall Capital

### Graduate Programs

- **Business, Masters**
- **Computational Math, Masters**
- **Computer Science, Masters, PhD**
- **Economics, PhD**
- **Engineering Science, Masters**
- **Industrial Engineering, Masters Operations Research, Masters**

Examples gathered from the First Destination Survey of recent Berkeley graduates.