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.

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.

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.

“\nThis 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

CONNECT WITH US

Cal Day
Come to UC Berkeley’s annual Open House in April for information sessions, campus tours, special talks, and more.

Golden Bear Orientation
Join your peers in the campus-wide UC Berkeley orientation program for all new students.

Events
Attend department events with students, faculty, and staff. Visit ieor.berkeley.edu for news and updates.

ADVISING

Visit Engineering Student Services in 230 Bechtel for advising on academic difficulty, change of major/double majors/simultaneous degrees, withdrawal/readmission, degree completion, education abroad, academic progress, and petitions and exceptions. See engineering.berkeley.edu/advising for more information.

For department-specific advising, contact the IEOR undergraduate advisor at ieor-student-services@berkeley.edu.

HOW TO USE THIS MAP

Use this map to help plan and guide your experience at UC Berkeley, including academic, co-curricular, and discovery opportunities. Everyone’s Berkeley experience is different and activities in this map are suggestions. Always consult with your advisors whenever possible for new opportunities and updates.

Visit vcue.berkeley.edu/majormaps for the latest version of this major map.
Discover your passions
Browse research taking place in Engineering centers, institutes, and labs.
- Visit the Office of Undergraduate Research and Scholarships
- Discover new interests in a Freshman Seminar or student-run DeCal course.
- Broaden your perspective by attending Newton Series or View from the Top Lectures.

Engage locally and globally
- Attend the Calapalooza student activities fair and get involved with a student organization.
- Explore Engineering student organizations.
- Find service opportunities through the Public Service Center.
- Explore study, internship, and research abroad options with Berkeley Study Abroad.
- Contribute to a community organization in an American Cultures Engaged Scholarship course such as ENGIN 194AC.
- Consider a Berkeley Global Internship such as the Engineering Internship in Toronto.
- Mentor local youth with Pioneers in Engineering or Berkeley Engineers and Mentors.

Reflect and plan your future
- Visit the Career Center and Career Counseling Library.
- Check out the Career Center Yearly Planner. Sign up for Handshake and CareerMail.
- Explore career resources on the Engineering and Career Center websites.
- Attend an ESS workshop to create a resume and LinkedIn page.
- Think about which industries interest you (supply chains, healthcare, semiconductors, transportation).
- Meet with a Career Center counselor to discuss your career options and goals.
- Explore careers through GLOBE Ambassadors and informational interviews.
- Pursue an internship and attend an internship career fair.

Explore your major
- Meet with your ESS advisor to discuss your academic plans.
- Familiarize yourself with major and college requirements.
- Talk to the IEOR advisor about department programs and research opportunities.

Connect and build community
- Take advantage of tutoring and workshops for Engineering students at the Center for Access to Engineering Excellence.
- Discover student opportunities in the ESS newsletter and new student podcast.
- Find study space and resources in the Kresge Engineering Library.
- Join an Engineering student group such as the Institute of Industrial Systems Engineers.
- Start attending department events.
- Get to know professors and graduate student instructors in office hours.
- Continue attending tutoring and workshops, and reading the weekly ESS newsletter.

Design your journey
- Focus on upper division requirements and electives such as machine learning (IEOR 140) or production systems analysis (IEOR 190).
- Continue meeting with your ESS advisor to review your academic progress.
- Take a Challenge Lab course (IEOR 185), Data X (IEOR 195) or another project-based class.
- Give back by becoming an ESS peer advisor.
- Join the Berkeley Engineering Group on LinkedIn.
- Explore volunteer groups outside of Engineering, and deepen your involvement with an Engineering student group.
- Check out Alpha Pi Mu, the Industrial Engineering Honor Society.

What can I do with my major?
The IEOR 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

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.