INTRODUCTION TO THE MAJOR

The Engineering Science (ES) program is a multi-departmental and interdisciplinary undergraduate program that encompasses closely-related areas of the physical sciences, mathematics and engineering. Students in the ES program acquire knowledge of engineering methods and can pursue their interests in areas of natural science, as well as advanced study in engineering, science, or mathematics. Students choose one of four majors: energy engineering, engineering mathematics and statistics, engineering physics, or environmental engineering science. A minor in energy engineering is also offered.

“...The classes across a variety of departments have allowed me to take a very interdisciplinary approach to engineering. And the great community within this major has taught me how to work with a team.”


MAJOR OPTIONS

Energy Engineering interweaves the fundamentals of classical and modern physics, chemistry, and mathematics with energy engineering applications.

Engineering Mathematics and Statistics is the study of pure and applied mathematics as essential components of modern engineering.

Engineering Physics interweaves classical and modern physics, chemistry, and mathematics with their engineering applications.

Environmental Engineering pairs engineering fundamentals with courses in the environmental and natural sciences.

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 engineeringscience.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/students/advising-counseling/

Contact the ES Undergraduate Advisor at engineeringscience@berkeley.edu about registration, departmental policy, and campus resources. Meet with an ES Faculty Advisor about coursework, careers in ES, graduate school, letters of recommendation, and summer internships. See engineeringscience.berkeley.edu/faculty/.

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 ue.berkeley.edu/majormaps for the latest version of this major map.

AMPLIFY YOUR MAJOR

- Get involved with a student group such as Society of Engineering Sciences
- Apply to GLOBE Ambassadors, a learning and travel program for Engineering students.
- Pursue a research opportunity for Engineering students.
- Enrich your studies with a minor in Energy and Resources or Sustainability.
FIRST YEAR
- Meet with your ESS advisor to discuss your academic plans.
- Familiarize yourself with major and college requirements
- Take to an ESS advisor about department programs and research opportunities.

SECOND YEAR
- Talk to ESS peer advisors about life in the major.
- Meet with your ESS advisor to discuss your academic progress.
- Complete lower division prerequisites and start planning your upper division courses.
- Plan now if considering a double major, simultaneous degree, minor, or study abroad.

THIRD YEAR
- Focus on upper division requirements and electives.
- Continue meeting with your ESS advisor to review your academic progress.
- Submit paperwork for a double major, simultaneous degree, minor, or study abroad.
- Meet with your ESS advisor to do an official degree check and plan for your final year.

FOURTH YEAR
- Give back by becoming an ESS peer advisor.
- Join the Berkeley Engineering group on LinkedIn.
- Explore student groups outside of Engineering, and deepen your involvement with an Engineering student group.
- Join a professional association such as the Association of Energy Engineers or American Physical Society.
- Continue attending tutoring and workshops, and reading the weekly ESS newsletter.

Connect and build community
- Take advantage of tutoring and workshops for Engineering students.
- Find academic support at the Student Learning Center and Center for Access to Engineering Excellence.
- Find student opportunities in the ESS newsletters and new student podcast.

Discover your passions
- Browse research taking place in Engineering centers, institutes, and labs.
- Attend the Undergraduate Research and Scholarships Fair in October.
- 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.
- Find service opportunities through the Public Service Center.
- Connect with other students during Engineers Week.

Reflect and plan your future
- Visit the Career Center and Career Counseling Library.
- 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.

WHAT CAN I DO WITH MY MAJOR?
- Graduates in Engineering Science gain a broad foundation for graduate studies in theoretical branches of engineering, as well as in mathematics, and are prepared for careers in specific sectors of industry or business, such as green technology, solar engineering, and environmental firms.
- Jobs and Employers
  - Data Engineer, Capital One
  - Data Scientist, Barclays Capital
  - Engineer, Northrop Grumman
  - Hybrid Calibration Engineer, General Motors
  - Project Coordinator, Climate Corps
  - Software Engineer, Primum Power
  - Project Engineer, New Energy Equity Research Assistant, California Institute of Technology
- Graduate Programs
  - Aerospace, Aeronautical, and Astronautical Artificial Intelligence and Robotics, PhD
  - Atomic/Molecular Physics, PhD
  - Electrical, Electronics, and Communications Engineering, Masters
  - Engineering, Masters
  - Materials Engineering, PhD
  - Physics, PhD

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