

Photo credit: Kevin Ho Nguyen

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.

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/.

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

Berkeley

Engineering Science 750 Davis Hall #1720 Berkeley, CA 94720-1720 engineeringscience.berkeley.edu

ENGINEERING SCIENCE Berkeley

Bachelor of Science



INTRODUCTION TO THE MAJOR

The **Engineering Science** (ES) program is a multidepartmental 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.



Photo credit: ES Department

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. T.G. Mekenzi Roberts, Energy Engineering Science, Class of 2020

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.

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.

ENGINEERING SCIENCE DESIGN YOUR JOURNEY

Bachelor of Science



FIRST YEAR THIRD YEAR SECOND YEAR FOURTH YEAR Explore Meet with your **ESS advisor** to discuss your Meet with your **ESS advisor** to do an official **degree** Talk to **ESS peer advisors** about life in the major. Focus on upper division requirements and electives. your major academic plans. check and plan for your final year. Meet with your **ESS advisor** to discuss your Continue meeting with your **ESS advisor** to review Familiarize yourself with major and college your academic progress. Complete any "bucket list" courses and remaining academic progress. major, college, and campus requirements. Submit paperwork for a double major, simultaneous Complete lower division prerequisites and start Talk to an **ES advisor** about department programs degree, minor, or study abroad. planning your upper division courses. and research opportunities. Plan now if considering a double major, Enroll in ENGIN 98: The Insider's Guide to simultaneous degree, minor, or study abroad. **Berkeley Engineering** Connect Give back by becoming an **ESS peer advisor**. Take advantage of tutoring and workshops for Join an **Engineering student group** such as Join a professional association such as the and build **Society of Engineering Sciences. Association of Energy Engineers or American** Engineering students. Join the Berkeley Engineering group on LinkedIn. **Physical Society**. Find academic support at the **Student Learning** Get to know Engineering professors and graduate Explore student groups outside of Engineering, student instructors during their office hours. Continue attending tutoring and workshops, and **Center and Center for Access to Engineering** and deepen your involvement with an **Engineering** reading the weekly ESS newsletter. Find study space and resources in the **Kresge** student group Find student opportunities in the **ESS newsletter Engineering Library** Connect with **alumni groups** and leverage your and new student podcast. **network** as you prepare to graduate. Discover Browse research taking place in Engineering Consider pursuing a research opportunity for Explore your mission and impact as an Engineer Teach your own **DeCal course**. your passions centers, institutes, and labs. Engineering and ES students. through the LeaderShape Institute. Consider being an instructor for **ENGIN 98**. Attend the Undergraduate Research and Apply to a **REU** research program. Check **Berkeley** Consider the **Sutardia Certificate in** Continue to pursue your interests through a Scholarships Fair in October. Lab and UCSF for more research options. **Entrepreneurship and Technology** or a summer **fellowship** or gap year after graduation. abroad through the **European Innovation** Discover new interests in a Freshman Seminar or Check out design and maker opportunities at the Choose your post-baccalaureate plans based upon student-run DeCal course. Jacobs Institute your intended mission and impact as an Engineer. Apply for a research opportunity if you haven't done Enrich your studies with a minor in **Energy and** Broaden your perspective by attending **Newton** so already. Series or View from the Top lectures. Resources or Sustainability. **Engage** Attend the **Calapalooza** student activities fair and Work with a community organization in an Take your engineering skills international through Serve as a student representative on a **college** locally and get involved with a student organization. **American Cultures Engaged Scholarship course Engineers Without Borders**. such as **ENGIN 157AC**. Find service opportunities through the **Public** Consider a **Berkeley Global Internship** such as the Hone your leadership skills with the **Peter E. Haas** Apply to **GLOBE Ambassadors**, a learning and Engineering Internship in Toronto. **Public Service Leaders program Service Center** travel program for Engineering students. Connect with other students during **Engineers** Experience life at another UC or college on a **visitor** Explore service opportunities after graduation, Mentor local youth with Pioneers in Engineering, and exchange program. such as **Peace Corps**, **Teach for America**, or **U.S. Berkeley Engineers and Mentors, or Engineering Department of State.** Planning a summer internship abroad? Apply for for Kids. travel funding from GLOBE Scholars. Reflect Visit Berkeley Career Engagement and the Career Attend career and graduate school fairs such as Ask professors and graduate student instructors for Discuss career options and goals with a Career and plan **Counseling Library**. the STEM Career & Internship Fair. recommendation letters your future Sign up for Handshake and CareerMail. Discuss graduate school options with advisors and Utilize **job board tools** in your job search. Meet Explore career opportunities through a winter externship and informational interviews. professors. employers at Employer Info Sessions and On-Explore career resources on Engineering website. **Campus Recruiting.** Sign up for a ESS career workshop, networking Learn about graduate and professional school Attend an **ESS workshop** to create a resume and dinner, or career conference. Attend the job offer negotiation workshop in ESS. LinkedIn page. Pursue an **internship** and attend an **internship**

Make an **advising appointment** in ESS and explore

options such as 5th year MS, MEng, and PhD.

Apply to jobs, graduate school, and other

opportunities.

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 to name a few.

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, Primus Power
Project Engineer, New Energy Equity
Research Assistant, California
Institute of Technology

Graduate Programs

Physics, PhD

Aerospace, Aeronautical, and
Astronautical Artificial Intelligence
and Robotics, PhD
Atomic/Molecular Physics, PhD
Electrical, Electronics, and
Communications Engineering,
Masters
Engineering, Masters
Materials Engineering, PhD

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

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