INTRODUCTION TO THE MAJOR

Bioengineering is the application of engineering principles to biological systems. Students in the Bioengineering major study math, physics, chemistry, and biology, in addition to computer sciences, electrical and mechanical engineering, and/or materials sciences. They bring these skills together in bioengineering courses where they learn to analyze, understand, repair, and alter biological materials and systems.

Collaboration and interdisciplinary perspectives are key skills we encourage in all of our students, and we prize cooperation over competition whenever possible. BioE graduates pursue successful careers in industry, further study in medical school, and graduate studies in bioengineering and related disciplines at top universities.


Our curriculum provides a strong foundation in engineering and the biological sciences, with the freedom to explore a variety of topics and specialize in advanced areas of research. All students take bioengineering fundamentals courses in areas such as biomechanics, instrumentation, and computational biology, and choose from a growing list of bioengineering topics for specialized advanced coursework. In addition, students will take BioE laboratory courses and complete a design or research project under faculty supervision.

Students can pursue a concentration in Biomedical Devices; Biomedical Imaging; Cell & Tissue Engineering; or Synthetic & Computational Biology.

Amplify Your Major

- Engage in undergraduate research on a faculty-initiated project or your own research topic.
- Get teaching experience as an Undergraduate Student Instructor or DeCal facilitator.
- Berkeley offers a wealth of opportunities, from supplemental classes like Bioprinting @ Berkeley to the Summer Biodesign Immersion Experience and the Fung Fellowship in wellness and technology.
BIOENGINEERING

Design Your Journey

Bachelor of Science

First Year
- Review the Bioengineering concentrations and general degree requirements.
- Look for classes that spark your interest (such as freshman seminars).
- Choose your concentration.
- Attend the BioE Town Hall.

Second Year
- Finish lower division courses.
- Talk with adviser(s) and use the multi-year teaching plan to plan your prerequisites and classes.
- Considering a minor or summer minor? Sketch out how it’ll fit into your 4-year plan.
- Attend the BioE Town Hall.

Third Year
- Choose classes from your concentration that will build the career skills you need.
- Check in with a major advisor on degree progress.
- Plan time for non-major courses on your bucket list.
- Attend the BioE Town Hall.

Fourth Year
- Meet with your major and college advisor to ensure you are fulfilling all major, college, and campus requirements.
- Take the Bioengineering Capstone Design course if you haven’t fulfilled your Design Requirement.
- Attend the BioE Town Hall.

Explore your major
- Meet other bioengineers at events and student groups like BioEHS and BMES.
- Go to office hours and study groups (SLC, ESS).
- Seek mentorship from upper division students.
- Get help if you need it and respect your limits.

Connect and build community
- Find opportunities in BioE Announcements and awards as available.
- Join Handshake for career resources.
- Apply for scholarships and awards as available.
- Explore volunteering opportunities on campus.

Discover your passions
- Plan for research. Make a resume, talk to faculty.
- Into health entrepreneurship? Apply for the Fung Fellowship.
- What kind of problems do you want to solve? Start thinking about how they relate to potential careers and what skills you’ll need.

Engage locally and globally
- Interested in studying abroad later? Check out the requirements now.
- Explore volunteering opportunities on campus.
- Attend Biotech Career Connections and BioTech Connect to learn about industry careers.
- Check out career paths through the Career Connections Networking Series.
- This is a great time for an off-campus internship! Visit another university for an REU.

Reflect and plan your future
- Check out the Career Center Yearly Planner.
- Attend Biotech Career Connections and BioTech Connect to learn about industry careers.
- Check out career paths through the Career Connections Networking Series.
- This is a great time for an off-campus internship! Visit another university for an REU.
- Attend BioTech Connect and Employer Info Sessions.
- Going to grad school? Take GRE/LSAT/MCAT.
- Explore post-grad options with Career Counselors and at Career Fairs and Graduate School Fairs.
- This is a great summer for an industry internship!

WHAT CAN I DO WITH MY MAJOR?

Graduate Programs
- Biological Sciences
- Biomedical Engineering
- Chemical Engineering
- Computer Science
- Genetics
- Medicine
- Molecular Biology
- Natural Resources Management & Policy
- Neurobiology

Jobs and Employers
- Clinical Research Coordinator, UCSF
- Engin. Tech., Verily Life Sciences
- Junior Specialist, UC Berkeley
- Optometric Ass't, Golden Gate Opt.
- Process Engineer, Illumina
- Research Ass't., Innovative Genomics
- Research Fellow, ETH Zurich
- Scientific Lab Ass't., Adv. Clinical Software Developer, IBM
- Software Engineer, Capital One
- Software Engineer, Google
- System Engineer Assoc., IRhythm
- Systems Engineer, Bio-Tech
- Technical Services, Epic Systems
- Wireless Engineer Intern, Kaiser

Graduate Options
- NSF fellowships
- Sutardja Center for Entrepreneurship & Technology
- Jacobs Institute for Design and Innovation, or Arts + Design
- Berkeley graduates.
- Explore gap year opportunities prior to embarking on your next academic or career adventure.
- Attend the BioE Town Hall.
- Attend the BioE Town Hall.

Examples gathered from the Career Destinations Survey of recent Berkeley graduates.

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