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.

THE FUTURE OF BIOLOGY.
THE FUTURE OF ENGINEERING.

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 Fung Fellowship in wellness and technology.

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.

ADVISING

Set an appointment or drop-in to meet with a Bioengineering undergraduate adviser.

Advising Appointments available:
Tuesday - Friday, 9:30 - 11:30am
Tuesday - Thursday, 1:15 - 4:00pm

Advising appointments will primarily meet via Zoom. In-person advising available on Thursdays or by appointment, when needed.

Appointments can be made via email at mariselal@berkeley.edu. It is strongly recommended you email to schedule an appointment.

CONNECT WITH US

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

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 bioeng.berkeley.edu for news and updates.

Bioengineering faculty care about my learning and success both as a student and as a future professional.

– Bioengineering student

THE FUTURE OF BIOLOGY.
# BIOENGINEERING

**Bachelor of Science**

## Design Your Journey

### Explore Your Major

- **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 advisor(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 and college 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.

### Connect and Build Community

- **First Year**
  - 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.

- **Second Year**
  - Keep going to office hours and study groups to build your connections.
  - Get to know faculty and grad students at professor lunches, Town Hall, research exhibits, etc.
  - Gain leadership experience in student organizations and ESS.

### Discover Your Passions

- **First Year**
  - Find opportunities in BioE Announcements emails.
  - Go to the BioE weekly Announcements to get inspired.
  - Read about faculty research in Bioengineering, but don’t worry about joining a lab your first year.

- **Second Year**
  - 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

- **First Year**
  - Interested in studying abroad later? Check out the requirements now.
  - Explore volunteering opportunities on campus.

- **Second Year**
  - Apply for study abroad.
  - Prime time for volunteering in the community - check out PIE, BEAM, BioEHS.
  - Apply to NSF Research Experience for Undergraduates (REU) and internship programs.

### Reflect and Plan Your Future

- **First Year**
  - Check out the Career Center Yearly Planner.
  - Join Handshake for Career resources.
  - Apply for scholarships and awards as available.
  - What are you doing this summer? Look into jobs, volunteering, courses, and internships (watch BioE Announcements).

- **Second Year**
  - 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.

- **Third Year**
  - 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 and Graduate School Fairs.
  - This is a great summer for an industry internship!

- **Fourth Year**
  - Grad school? Take to grad students and advisors. Ask for letters of recommendation EARLY. Apply for fellowships (hint: NSF).

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### Jobs and Employers

- Clinical Research Coordinator, UCSF
- Engin. Tech., Verly Life Sciences
- Junior Specialist, UC Berkeley
- Optometric Asst., Golden Gate Opt.
- Process Engineer, Illumina
- Research Assist., Innovative Genomics
- Research Fellow, ETH Zurich
- Scientific Lab Assist., Adv. Clinical Software Developer, IBM
- Software Engineer, Capital One
- Software Engineer, Google
- System Engineer Assoc., JRIhythm
- Systems Engineer, Bio-Techne
- Technical Services, Epic Systems
- Wireless Engineer Intern, Kaiser

### Graduate Programs

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

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

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Updated 06.05.2023