

Photo credit: Shannon Ciston

## **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 **chemistry.berkeley.edu** for news and updates.

## **ADVISING**

Staff advisors are located in 121 Gilman Hall and are available to assist with schedule planning, course enrollment, study abroad, and other academic matters.

Faculty mentors are available to talk with you about career planning, research, internships, graduate school, and many other questions related to becoming a scientist.

Visit chemistry.berkeley.edu/ugrad/current**students/advisers** to find your staff advisor and faculty mentor, and to book an appointment.

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

# Berkeley

**College of Chemistry Undergraduate Student Services** 121 Gilman Hall Berkeley, CA 94720-1460 chemistry.berkeley.edu/ugrad/student-services

# CHEMICAL **ENGINEERING**

**Bachelor of Science** 

## **INTRODUCTION TO THE MAJOR**

The Chemical Engineering major equips students for professional work in development, design, and operation of chemical processes and of process equipment, as well as preparing students for graduate study. The program incorporates both breadth requirements and a technical curriculum to ensure that students develop a foundation in engineering and science along with developing the skills to write clearly, persuasively, and read critically and effectively.

Students go on to careers of leadership and innovation in chemical engineering and related fields, and expand the base of engineering knowledge through original research and creating new technologies that can benefit the public. The program is accredited by the Engineering Accreditation Commission of ABET.

Chemical engineering allows you to craft elegant solutions to seemingly unsolvable problems—the program and faculty will transform you.

## **STUDY OPTIONS**

Students can pursue a **concentration** in biotechnology, chemical processing, environmental technology, materials science and technology, applied physical science, and business and management.

Students can also choose to pursue a joint **major** with the College of Engineering in Materials Science or Nuclear Engineering, or a **simultaneous degree** in Business Administration through the Haas School of Business.





Photo credit: Shannon Ciston

- Aditya Nandy, recent graduate

# **AMPLIFY YOUR MAJOR**

- Apply to the **Chemistry and Chemical** Engineering Scholars Program to be an Undergraduate Student Instructor.
- Join a ChemE student organization such as AIChE, Aurum Cosmetics, Biofuels Technology Club, or ChemE Car.
- Present your research at the College of Chemistry poster session in April.
- Apply to the **CBE Innovation Incubator**, a lab to conduct student-directed projects.

# CHEMICAL ENGINEERING Bachelor of Science

# **DESIGN YOUR JOURNEY**

	FIRST YEAR	SECOND YEAR	1 (	THIRD YEAR	FOURTH YEAR
<b>Explore</b> your major	Meet with your <b>staff advisor</b> to discuss your academic plans. Familiarize yourself with <b>major</b> and <b>college</b> <b>requirements</b> . Learn about <b>undergraduate student services</b> from the college. Talk to <b>peer advisors</b> about life in the major.	Complete lower division prerequisites and start planning your upper division courses. Review the college guidelines for <b>study abroad</b> .		Focus on upper division requirements. Review your degree progress with your <b>staff</b> <b>advisor</b> . Declare a <b>concentration</b> to give more focus to your upper division coursework. Ask the staff advisor about the college <b>honors</b> <b>programs</b> .	Do a degree check to ensure you are on track to graduate. Complete any "bucket list" courses and finish remaining major, college, and campus requirements. Complement your major with a <b>certificate</b> , <b>course thread</b> , or <b>summer minor</b> .
<b>Connect</b> and build community	Visit <b>peer tutors</b> in Bixby Commons for help with chemistry, math, physics, and other classes. Find study groups, tutoring, and academic support at the <b>Student Learning Center</b> . Get help from <b>peer advisors</b> in 121 Gilman Hall. Join the <b>College of Chemistry group</b> on LinkedIn.	Join a College of Chemistry <b>student</b> <b>organization</b> such as <b>AIChE</b> , Aurum Cosmetics, Biofuels Technology club, or ChemE Car. Explore the college's <b>centers &amp; institutes</b> . Attend college <b>seminars and events</b> to learn about new research and meet guest speakers.		Give back by becoming a <b>peer advisor</b> or <b>peer tutor</b> in the college. Welcome new students to UC Berkeley as a <b>Golden Bear Orientation Leader</b> . Get to know professors and graduate student instructors during their office hours.	Join a professional organization related to your interests, such as <b>Alpha Chi Sigma</b> . Connect with <b>alumni groups</b> and build your <b>network</b> as you prepare to graduate.
<b>Discover</b> your passions	<ul> <li>Talk to your <b>faculty mentor</b> about research, internships, careers, and graduate school.</li> <li>Explore <b>research opportunities</b> in ChemE.</li> <li>Visit the <b>Office of Undergraduate Research and Scholarships</b>.</li> <li>Discover new interests in a <b>Freshman Seminar</b> or student-run <b>DeCal course</b>.</li> </ul>	Browse the <b>faculty research</b> taking place in the college and talk to faculty about research opportunities for students. Apply to a <b>REU research program</b> . Check Berkeley Lab and UCSF for more options. Explore a career in education while gaining teaching skills with <b>CalTeach</b> .		Become an apprentice instructor, mentor, or an Undergraduate Student Instructor through the <b>Chemistry Undergraduate Teacher Scholar</b> <b>Program</b> or the <b>Chemistry and Chemical</b> <b>Engineering Scholars Program</b> . Apply to the <b>CBE Innovation Incubator</b> , a lab to conduct student-directed projects.	Apply for a <b>Conference Travel Grant</b> . Teach your own <b>DeCal course</b> . Keep pursuing your interests through a <b>fellowship</b> or gap year after graduation. Present your research at the College of Chemistry poster session in April.
<b>Engage</b> locally and globally	Attend the <b>Calapalooza</b> student activities fair and get involved with a student organization. Find service opportunities through the <b>Public</b> <b>Service Center</b> . Explore study, internship, and research abroad options with <b>Berkeley Study Abroad</b> .	Contribute to a community organization with an <b>American Cultures Engaged Scholarship</b> <b>course</b> . Go on a service-learning trip with the <b>Alternative Breaks Program</b> . Consider a <b>Berkeley Global Internship</b> in the United States or abroad.		Experience life at another UC or college on a <b>visitor and exchange program</b> . Study and intern in Washington D.C. with <b>UCDC</b> or <b>Cal in the Capital</b> .	Hone your leadership skills with the <b>Peter E.</b> <b>Haas Public Service Leaders program</b> . Explore service opportunities after graduation, such as <b>Peace Corps, Teach for America</b> , or <b>U.S. Department of State</b> .
<b>Reflect</b> and plan your future	Visit <b>Berkeley Career Engagement</b> and the <b>Career Counseling Library</b> . <b>Develop a plan</b> for getting career ready. Sign up for <b>Handshake</b> and <b>CareerMail</b> . Learn about <b>chemical engineering as a</b> <b>profession</b> and explore career resources on the <b>College of Chemistry website</b> .	Discuss career options and goals with a <b>Career</b> <b>Educator</b> . Explore <b>career fields</b> through the <b>Career</b> <b>Connections Series</b> or a <b>winter externship</b> . Learn about <b>graduate and professional</b> <b>school</b> . See <b>Step-by-Step</b> for planning help. Think about doing an <b>internship</b> and attend an <b>internship fair</b> .		Conduct <b>informational interviews</b> . Discuss post-graduate options with advisors and professors. Attend <b>career and graduate school fairs</b> such as the STEM Career & Internship Fair. Join industry information sessions hosted by the CBE Department or affiliated clubs.	Utilize <b>job board tools</b> in your job search. Ask professors and graduate student instructors for recommendation letters. Meet employers at <b>Employer Info Sessions</b> and <b>On-Campus Recruiting</b> . Apply to jobs, graduate school, and other opportunities.







#### Jobs and Employers

Applications Engineer, KLA-Tencor Associate Analyst, ZS Associates Consultant, IBM Corp Engineer, ExxonMobil Lab Technician, Full Cycle Bioplastics Process Engineer, Abaxis R&D Process Engineer, PLANTPV Research Assistant, Zymergen

### **Graduate Programs**

BioPhysics, PhD Chemical Engineering, PhD Materials Engineering, PhD Physical & Theoretical Chem. PhD

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

Updated: 11.02.23

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