BIOENG 25 Syllabus

Facilitator:

Hayley Lam hayleylam@berkeley.edu

Office hours: by appointment (don't be afraid to email me!)

Description:

This introductory seminar is designed to give freshmen and sophomores a glimpse of a broad selection of careers in bioengineering. Students will become familiar with the sorts of solutions designed by bioengineers in industry.

Course Format:

Students must attend IN PERSON at 105 Stanley on Wednesdays 4-5pm.

Exception: If a speaker is remote, students may attend synchronously via zoom WITH CAMERA ON AND REGISTERED NAME DISPLAYED, or attend in person at 105 Stanley (where I will be present, broadcast the video and facilitate Q&A).

All attendance quizzes will stay open for one week after the original talk/class occurs: they will open at 4pm Wednesday and stay open until 4pm the following Wednesday (before class the following week.)

Grading:

UC Berkeley Honor Code: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others."

Students will be graded according to attendance quizzes. Attendance will be checked on an honor system; students will use a bcourses quiz/survey to certify that they were either present for (or attended synchronously via zoom with camera on, if the speaker is remote) a given seminar. Engineering is a professional discipline. We expect you to consider this class a professional obligation, and act as such.

That said, I will randomly take in person attendance (and/or take random screen shots of zoom attendees when the speaker is remote). These will be used to spot check against the bCourses quiz/surveys to confirm attendance on a random basis.

A passing grade will require no more than four (4) absences. With fourteen classes (14), this means you must attend at least ten (10) classes AND complete the respective

attendance quizzes within a week of the original class. If there is any reason you are not able to meet the attendance requirement, please email me ASAP to resolve the issue (please also see Accessibility and Accommodations below) **There is no final exam for BioE 25.**

Inclusion Statement:

I am committed to creating a learning environment that supports a diversity of thoughts, perspectives, experiences. As a participant in this class, understand that we all have a collective responsibility to be proactive in creating an inclusive place to learn.

This means we must all strive to build an environment that is welcoming of all identities and backgrounds (including race/ethnicity, nationality, gender identity, socioeconomic class, sexual orientation, language, religion, ability, etc.)

- If you feel like your performance in the class is being impacted by your experiences outside of class (e.g., family matters, current events), please don't hesitate to come and talk to me. (see also Accessibility and Accommodations)
- Everyone is continually in the process of learning about diverse perspectives and identities. If something is said in class (by anyone) that makes you uncomfortable, please let me know. You can also contact the bioengineering faculty equity advisor, Chris Anderson at jcanderson@berkeley.edu. An anonymous feedback form is also available at https://engineering.berkeley.edu/about/equity-and-inclusion/feedback.

Accessibility and Accommodations:

Everyone has different needs in learning and in life and it is important that I am made aware of any extenuating circumstances that may impact your participation in the class. Please communicate early and often if there are any accommodations that should be made for any reason, including but not limited to: disabilities, religion, and medical and mental health (emergency and non-emergency). I am available by email, before class, during office hours, and by appointment. We will respect your privacy under state and Federal laws, and you will not be asked to share more than you are comfortable sharing. The disabled student program is a related resource, listed below.

Schedule (subject to change without notice):

	Date	Talk	Name	Position	Company	Format

1	1/22/2025	Intro to Bioeng 25	Hayley Lam	Director, Portfolio Development and Review; Lecturer, UC Berkeley Dept of Bioengineering	California Institute for Regenerative Medicine	in person
2	1/29/2025	Intro to ISPE and Biomanufacturing	David Mourra	Senior Engineer	Bayer	in person
3	2/5/2025	Finding your Career Path in Product Design	Arun Chawan	Product Design Engineer	Apple	in person
4	2/12/2025	Doing Science in the Agricultural Research Service, the research arm of the U.S. Department of Agriculture	Taner Sen	Research Computational Biologist, U.S. Department of Agriculture, Agricultural Research Service Adj. Prof., UC Berkeley, Dept. of Bioengineering	USDA-ARS; GrainGenes	by zoom

5	2/19/2025	Advancing the Clinical Development of CRISPR Genome-edited Allogeneic CAR-T Cell Therapies	Rachel Haurwitz	CEO and President	Caribou Life Sciences	in person
6	2/26/2025	Learning and Contributing Through UC and Transition into Biotech Assay Development	Joe Callahan	Principal Technical Development Scientist	Genentech	by zoom
7	3/5/2025	Drug-eluting stent: post-mortem of and interplay within a medical device development program	Syed Hossainy	Director Applied Bioengineering and Adjunct Professor	UC Berkeley	in person
8	3/12/2025	TBD	Verna Rodriguez	Executive Director	Master of Translational Medicine, Bioengineering, UC Berkeley	in person
9	3/19/2025	Bioengineering in drug development: From concept to clinic	Jennifer Park and Austin Boesch	BD and Strategy; CEO	Jibe Therapeutics	by zoom

	3/26/2025	SPRING BREAK				
10	4/2/2025	The career path of a physician-scientist, entrepreneur-innovator, CEO and professor	David Kirn	CEO and Co-Founder	4D Molecular Therapeutics	in person
11	4/9/2025	The Career of Theseus	Steve Pham	Clinical Assistant Professor	UCSF, ZS Associates, Proton Intelligence	in person
12	4/16/2025	Regulatory Affairs and Medical Device Innovation	Zane Liu	Director, Regulatory Affairs	CapsoVision, Inc	in person
13	4/23/2025	TBD	Calista Prananta	Business Development Associate	Esteve	in person
14	4/30/2025	Engineering breath: The successful pivot of a Physician into MedTech	Maria Artunduaga	CEO	Samay	in person

Campus Resources:

Center for Access to Engineering Excellence (CAEE)

The Center for Access to Engineering Excellence (227 Bechtel Engineering Center;

https://engineering.berkeley.edu/student-services/academic-support) is an inclusive center that offers study spaces, nutritious snacks, and tutoring in >50 courses for Berkeley engineers and other majors across campus. The Center also offers a wide range

of professional development, leadership, and wellness programs, and loans iclickers, laptops, and professional attire for interviews.

Disabled Students' Program (DSP)

The Disabled Student's Program (260 César Chávez Student Center #4250; 510-642-0518; http://dsp.berkeley.edu) serves students with disabilities of all kinds. Services are individually designed and based on the specific needs of each student as identified by DSP's Specialists. If you have already been approved for accommodations through DSP, please know that DSP is ready to quickly adjust your accommodations if your situation changes.

Counseling and Psychological Services

University Health Services Counseling and Psychological Services staff are available to you at the Tang Center (http://uhs.berkeley.edu; 2222 Bancroft Way; 510-642-9494) and in the College of Engineering (https://engineering.berkeley.edu/students/advising-counseling/counseling; 241 Bechtel Engineering Center), and provide confidential assistance to students managing problems that can emerge from illness such as financial, academic, legal, family concerns, and more. Long wait times at the Tang Center in the past led to a significant expansion to include a 24/7 counseling line at (855) 817-5667. This line will connect you with help in a very short time-frame. Short-term help is also available from the Alameda County Crisis hotline: 800-309-2131. If you or someone you know is experiencing an emergency that puts their health at risk, please call 911.

The Care Line (PATH to Care Center)

The Care Line (510-643-2005; https://care.berkeley.edu/care-line/) is a 24/7, confidential, free, campus-based resource for urgent support around sexual assault, sexual harassment, interpersonal violence, stalking, and invasion of sexual privacy. The Care Line will connect you with a confidential advocate for trauma-informed crisis support including time-sensitive information, securing urgent safety resources, and accompaniment to medical care or reporting.

Ombudsperson for Students

The Ombudsperson for Students (102 Sproul Hall; 642-5754; http://students.berkeley.edu/Ombuds) provides a confidential service for students involved in a University-related problem (academic or administrative), acting as a neutral complaint resolver and not as an advocate for any of the parties involved in a dispute. The Ombudsman can provide information on policies and procedures affecting students, facilitate students' contact with services able to assist in resolving the problem, and assist students in complaints concerning improper application of University policies or procedures. All matters referred to this office are held in strict confidence. The only exceptions, at the sole discretion of the Ombudsman, are cases where there appears to be imminent threat of serious harm.

UC Berkeley Food Pantry

The UC Berkeley Food Pantry (#68 Martin Luther King Student Union; https://pantry.berkeley.edu) aims to reduce food insecurity among students and staff at UC Berkeley, especially the lack of nutritious food. Students and staff can visit the pantry as many times as they need and take as much as they need while being mindful that it is a shared resource. The pantry operates on a self-assessed need basis; there are no eligibility requirements. The pantry is not for students and staff who need supplemental snacking food, but rather, core food support.