

The background image shows a scenic view of the University of California, Berkeley campus. In the foreground, two large bronze statues of grizzly bears are lying down on a paved area. Behind them is a low green hedge. In the background, a large classical building with white columns and a tall clock tower (Sather Tower) are visible under a clear blue sky.

Berkeley
Engineering

Applied AI in Engineering Summer Institute

IN COLLABORATION WITH **SHORELIGHT**

PUBLIC

Table of Contents

- 01 Program Overview
- 02 Academic Programming
- 03 Industrial Experience
- 04 Benefits & Testimonials
- 05 Included in Price
- 06 Registration



01

Program Overview

Berkeley
Engineering



PUBLIC

Program Overview

Applied AI in Engineering Summer Institute

SESSION DATES

July 5 – July 17, 2027

Program Highlights

- › Applied AI in energy, design, manufacturing and more
- › San Francisco Bay Area, with Silicon Valley access
- › UC Berkeley affiliated program

What You Leave With

- › Certificate of Achievement and Letter of Completion from UC Berkeley
- › Letter of Recommendation available on request*
- › Completed capstone project for your resume and portfolio

PROGRAM COST

\$8,750 (Residential)
\$6500 (Course-only)

*Provided at the discretion of program faculty

Berkeley
Engineering

IN COLLABORATION WITH SHORELIGHT



PUBLIC

Location

Throughout this two-week program, students will live on UC Berkeley's campus.

Berkeley, California, is a vibrant city known for its diverse culture and academic prowess. Located less than 15 miles from San Francisco, it offers a youthful atmosphere with eclectic shops, street art, and a lively food scene. Visitors can explore the historic Telegraph Avenue or enjoy outdoor activities at beautiful city parks.



Berkeley College of Engineering at a Glance

Berkeley's College of Engineering is ranked among the best engineering schools in the world, making it the perfect setting for students interested in the future of applied artificial intelligence and innovation in engineering.



#3 Best Engineering School

U.S. News & World Report, 2026

#7 Best Global Universities

U.S. News & World Report, 2026-2027

#5 America's Top Colleges

Forbes, 2026

02

Academic Programming

Berkeley
Engineering



Academic Components - Faculty Lectures

Through a series of core faculty lectures, students engage directly with UC Berkeley researchers on advanced topics spanning:

- AI, Computation, and the Foundations of Intelligent Systems
- AI for Energy, Sustainability, and Industrial Systems
- Robotics, Autonomy, and AI in Motion



Core Seminar Themes

Theme 1: AI, Computation, and the Foundations of Intelligent Systems

Dates: July 5–6

This theme introduces the core principles underlying modern AI systems, emphasizing how technical design choices intersect with human behavior, trust, and societal impact. Students examine foundational machine learning concepts alongside critical questions of ethics, transparency, and governance in large-scale computational systems.

Representative topics include:

- Machine learning fundamentals and recommendation systems
- Algorithmic evaluation and performance metrics
- Human-centered AI and trust in AI-assisted systems
- Social, political, and ethical implications of computing
- Values embedded in smart systems and digital infrastructure

Core Seminar Themes

Theme 2: AI for Energy, Sustainability, and Industrial Systems

Dates: July 8, 11–12

This theme explores how AI is applied to energy systems, industrial processes, and large-scale infrastructure, with a focus on sustainability, resilience, and efficiency. Students engage with examples spanning renewable energy, nuclear systems, advanced manufacturing, and materials science, highlighting AI's role in optimizing complex, high-impact systems.

Representative topics include:

- Geothermal, solar, ocean, and nuclear energy systems
- AI-driven optimization and predictive modeling in energy infrastructure
- Advanced manufacturing and semiconductor technologies
- Sustainable materials and electronics
- Industrial supply chains and systems-level sustainability

Core Seminar Themes

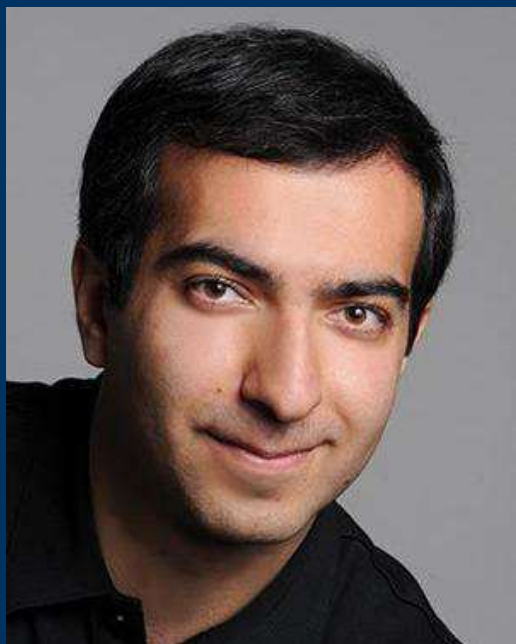
Theme 3: Robotics, Autonomy, and AI in Motion

Dates: July 13–14

This theme focuses on embodied and autonomous AI systems operating in dynamic, real-world environments. Emphasis is placed on perception, planning, control, and safety-critical decision-making in robotic and autonomous platforms.

Representative topics include:

- Legged robotics and loco-manipulation
- Aerial robotics and autonomous flight
- Perception-aware planning and navigation
- Safety-critical control and learning-based autonomy
- Autonomous vehicles and intelligent transportation systems



Mohammad-Reza Alam

Professor, Mechanical Engineering

Berkeley
Engineering

FACULTY SPOTLIGHT

Learn from engineering faculty who are at the top of their fields.

Professor Mohammad-Reza Alam is the American Bureau of Shipping Chair in Ocean Engineering and is Professor and Vice Chair of the Department of Mechanical Engineering at UC Berkeley.

His research interests include theoretical and experimental fluid dynamics, ocean and coastal waves phenomena, dynamical systems and nonlinear dynamics, and fluid flow controls. He received his PhD from the Massachusetts Institute of Technology in 2008 and joined the faculty of UC Berkeley in 2011.

Professor Alam serves as the director of the “Ocean and Coastal Science and Engineering” program and the “Theoretical and Applied Fluid Dynamics Laboratory” at UC Berkeley.



Dr. Koushil Sreenath

Associate Professor, Mechanical
Engineering

FACULTY SPOTLIGHT

Learn from engineering faculty who are at the top of their fields.

Dr. Koushil Sreenath is an Associate Professor of Mechanical Engineering, at UC Berkeley. His research interest lies at the intersection of highly dynamic robotics and applied nonlinear control.

His work on dynamic legged locomotion was featured on The Discovery Channel, CNN, ESPN, FOX, and CBS. His work on dynamic aerial manipulation was featured on the IEEE Spectrum, New Scientist, and Huffington Post.

His work on adaptive sampling with mobile sensor networks was published as a book. He received the NSF CAREER, Hellman Fellow, Google Faculty Research Award in Robotics, and Best Paper Awards at Learning for Dynamics and Control (L4DC) and Robotics: Science and Systems (RSS).



Mark Mueller

Professor, Mechanical Engineering

FACULTY SPOTLIGHT

Learn from engineering faculty who are at the top of their fields.

Professor Mueller joined the Mechanical Engineering Department at Berkeley in August 2016. He received a bachelor's degree from the University of Pretoria, followed by a masters (2011) and doctorate (2015) from the ETH Zurich, all in Mechanical Engineering.

Mark heads the High Performance Robotics Laboratory, with a research focus on the design, dynamics, and control of autonomous aerial systems. He is also organizer of the Bay Area Robotics Symposium and serves as an Associate Editor for IEEE Robotics and Automation Letters and Unmanned Systems.

He received the 2016 George Giralt PhD award for the best robotics-related PhD thesis defended during the year 2015 at a European PhD-awarding institution, as well as the 2011 Jacob Ackeret prize from the Swiss Association of Aeronautical Sciences for his Masters Thesis.



Dr. Kosa Goucher-Lambert

Assistant Professor, Mechanical Engineering

Berkeley
Engineering

FACULTY SPOTLIGHT

Learn from engineering faculty who are at the top of their fields.

Dr. Kosa Goucher-Lambert is an Assistant Professor of Mechanical Engineering at the University of California, Berkeley. He is also affiliated with the Jacobs Institute of Design Innovation and the Berkeley Institute of Design.

Kosa received his B.A in Physics from Occidental College and his M.S. and Ph.D. in Mechanical Engineering from Carnegie Mellon University. His research focuses on decision-making in engineering design, using mathematical analyses, computational modeling, human cognitive studies, and neuroimaging approaches.

He is a recipient of the National Science Foundation CAREER Award, 2019 Excellence in Design Science Award, and several best paper awards.



Dr. Zakaria Al Balushi

Assistant Professor, Materials Science
and Engineering

FACULTY SPOTLIGHT

Learn from engineering faculty who are at the top of their fields.

Dr. Zakaria Al Balushi is an Assistant Professor in the Department of Materials Science and Engineering at UC Berkeley, co-Director of the Berkeley Emerging Technologies Research (BETR) Center, and a faculty scientist at the Lawrence Berkeley National Laboratory.

He has degrees in Engineering Science and Materials Science and Engineering from The Pennsylvania State University (Penn State.)

His research has spanned silicon nanowire devices, group-III nitride semiconductors, and low-dimensional materials. Before Berkeley, he was a postdoctoral fellow at Caltech. He has received several awards, including the NSF CAREER and Micron Corporation Early Career Awards.



Dr. Josh Hug

Associate Professor, Electrical
Engineering and Computer Sciences

FACULTY SPOTLIGHT

Learn from engineering faculty who are at the top of their fields.

Dr. Josh Hug has been an Associate Teaching Professor at UC Berkeley in Electrical Engineering and Computer Sciences since August 2014. His research includes computational models of bacterial signal processing. He was a former lecturer at Princeton University and has also worked at perfectrec.com

He received his PhD from UC Berkeley and a B.S. in Electrical Engineering from the University of Texas at Austin.

Awards include the Diane S. McEntyre Award for Excellence in Teaching Computer Science, the Jim and Donna Gray Award for Excellence in Undergraduate Teaching, and the Distinguished Teaching Award.

Academic Components - Capstone Seminar and Project

AI in Practice

Week 1

- Research Seminars & Project Labs
- From LLMs to Agentic Tools
- Deep Learning Algorithms
- Principles of Generative Modeling

Project Labs: Translate seminar concepts into hands-on technical work and begin developing ideas for the capstone.

Week 2

Capstone Development & Showcase

Present the final work during the capstone showcase.



03

Industrial Experience

Berkeley
Engineering



PUBLIC

Amazon Fulfillment Center

Students get a behind-the-scenes look at how Amazon combines people, automation, robotics, and logistics to fulfill customer orders at scale.

- Observe the full fulfillment process – from storage and picking to packing and shipping
- See employees working alongside advanced robotics and automation
- Explore how technology supports speed, accuracy, and operational efficiency
- Learn how Amazon uses large-scale systems to enhance the customer experience
- Gain exposure to real-world applications of AI, engineering, supply chain, and operations



Intel Museum

Students explore the technology, manufacturing processes, and history behind one of Silicon Valley's most influential semiconductor companies. The 10,000-square-foot Intel Museum includes interactive exhibits on microprocessors, silicon chip design, chip fabrication, and cleanroom manufacturing.

- Go behind the scenes of an ultra-clean, highly automated chip fabrication environment
- Discover how silicon chips are designed and manufactured, from transistors to processors
- Explore the evolution of Intel microprocessors and semiconductor technology
- Engage with interactive exhibits demonstrating how computing technology shapes the way we work, learn, communicate, and play
- Connect classroom concepts in AI and engineering to the hardware and manufacturing infrastructure that powers modern computing



Guest Speakers 2026

Alessandro Gnoli - Leadership in the Age of AI
Software Engineer, Google

Ale Gnoli works on AI and machine learning systems at Google. His background spans distributed systems, IoT, startups, and large technology companies. He is also an active engineering mentor and writes about technology and building.

Student Takeaway

- “Effective leadership in the age of AI is about managing AI while leading people.”
- *“AI is especially valuable for routine tasks and reversible decisions, while high-impact, irreversible decisions should remain under human responsibility.”*



Guest Speakers 2026

Ludovico Federici - AI, Entrepreneurship & Relationships
Co-Founder & CEO, Merivia

Ludovico Federici is building AI systems that help organizations measure and improve sustainability impact. A UC Berkeley graduate in Computer Science and Cognitive Science with a Data Science minor, his experience includes machine learning, data science, and product development at Spotify, NVIDIA, and AI startups.

Student Takeaway

- *"AI can help build a career or company, but relationships are what open doors."*
- Students found the discussion practical and especially valued the speaker's perspective on building relationships, using AI to support entrepreneurship, and maintaining professional connections over time.



SAMPLE Program Structure

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
WEEK 1 • MONDAY JULY 5 – FRIDAY JULY 9				
■ 9:00 AM–4:00 PM Cohort Arrival Airport pickup • Check-in • Site tour ■ 5:00–6:00 PM Dinner and Grocery Shopping ■ 6:00–7:00 PM Program Orientation ■ 7:00–8:00 PM Social Night	■ 8:00–9:00 AM Breakfast ■ 9:00 AM Orientation with GLOBE ■ 9:30–11:00 AM Seminar Walk, Run, Leap: Adventures in Legged Locomotion ■ 11:10 AM–12:40 PM Capstone Seminar ■ 12:40–2:00 PM Lunch ■ 2:00–3:30 PM Seminar Self-Driving Cars — Hope or Hype / AI for Battery Storage ■ 3:40–5:10 PM Capstone Seminar ■ 5:10–6:00 PM Group Discussion ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Seminar Balancing AI Advancements with Safety-Critical Control ■ 11:10 AM–12:40 PM Capstone Seminar ■ 12:40–2:00 PM Lunch ■ 2:00–3:30 PM Seminar Designing Novel Aerial Robots ■ 3:40–5:10 PM Capstone Seminar ■ 5:10–6:00 PM Group Discussion ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:00 AM Breakfast ■ 9:00 AM–6:00 PM Amazon and Intel Visit ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Seminar AI and Energy 1 (Wind and Geothermal) ■ 11:10 AM–12:40 PM Capstone Seminar ■ 12:40–2:00 PM Lunch ■ 2:00–3:30 PM Seminar AI and Energy 2 (Sun and Ocean) ■ 3:40–5:10 PM Capstone Seminar ■ 5:10–6:10 PM Guest Speaker ■ 6:10–7:10 PM Dinner ■ 7:10–8:00 PM Social Night
WEEK 2 • MONDAY JULY 12 – FRIDAY JULY 16				
■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Seminar Modeling, Simulation and Machine Learning for Industrial Systems ■ 11:00 AM–12:30 PM Lunch ■ 12:30–2:00 PM Campus Tour ■ 2:30–3:30 PM Capstone Seminar ■ 3:30–4:30 PM Capstone Advisory ■ 4:30–6:00 PM Capstone Preparation ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Capstone Seminar ■ 11:10 AM–12:10 PM Capstone Preparation ■ 12:10–2:00 PM Lunch ■ 2:00–3:30 PM Seminar Driving Energy Sustainability: The Vital Role of Advanced Manufacturing ■ 3:30–5:30 PM Capstone Preparation ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Seminar Machine Learning and Recommendation Systems ■ 11:10 AM–12:10 PM Wind Tunnel Tour ■ 12:10–2:00 PM Lunch ■ 2:00–3:30 PM Seminar AI and Design (1) ■ 4:00–6:00 PM Capstone Preparation ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Seminar The Social Implications of Computing ■ 11:15 AM–12:15 PM Jacob Institute Tour ■ 12:15–2:00 PM Lunch ■ 2:00–3:30 PM Seminar AI and Design (2) ■ 3:30–6:00 PM Capstone Preparation ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night	■ 8:00–9:30 AM Breakfast ■ 9:30–11:00 AM Seminar Modeling, Simulation and Machine Learning for Industrial Systems ■ 11:10 AM–12:10 PM Capstone Seminar ■ 12:10–2:00 PM Lunch ■ 2:00–3:30 PM Capstone Presentation ■ 3:30–5:00 PM Completion Ceremony ■ 5:00–6:00 PM Free Time ■ 6:00–7:00 PM Dinner ■ 7:00–8:00 PM Social Night
■ Seminars	■ Capstone & group work	■ Visits, tours & orientation	■ Guest speakers & ceremony	■ Meals, social & free time

Saturday: [Big Bus City Tour](#)
Sunday: [Outlet Shopping and Sunset Hike](#)

04

Benefits & Testimonials

Berkeley
Engineering



PUBLIC

Why Students Love It

“

The lessons were so valuable, and I'm grateful to have learned so much alongside such amazing people.

Marcos Summer 2025 Participant, Brazil

“

Come, 100%. You're going to have a great time, learn a lot, and meet some really cool people.

Alvaro Summer 2026 Participant, Spain

“

I don't have any technology background at all in my previous experience. I did learn a lot of knowledge regarding AI, and all the people I met it was really fun. I enjoy it so much.

Jingwen Summer 2025 Participant, China

“

Every moment felt like learning, from applying for the visa, to traveling here, to writing daily reflections. Everything helped me grow.

Saniya Summer 2025 Participant, India

Lecture Reflections

//

This seminar ignites my passion on robotics and anatomy. I want to dive in robotics + AI and energy in the future.

 **Jimmy** Summer 2026 Participant, China

//

This lecture made me realize that AI is becoming an important tool for solving energy and climate challenges!

 **Yunpeng** Summer 2026 Participant, China

//

The passive dynamics section surprised me most... [it] made me rethink whether the best control is sometimes less control.

 **Wentao** Summer 2026 Participant, China

//

The lecture provided a great perspective on how legged locomotion has evolved from strictly rigid control to something much more fluid.

 **Bernardo** Summer 2026 Participant, Brazil

Program Benefits

How do undergraduate enhancement programs help me with my career and future studies?

01

Eye-Opening, Life-Changing Experience

- › Broaden your worldview through interaction with top research faculty, industry leaders, and diverse peers
- › Gain exposure to cutting-edge AI research and real applications
- › Develop global awareness and interdisciplinary perspective

02

Clarify Your Career Direction

- › Explore AI fields, from healthcare to robotics to policy
- › Understand what area resonates with your strengths and goals
- › Shape your academic pathway and future specialization with confidence

03

Strong Resume Boost for Future Studies

- › Earn a certificate, completion letter, and leave with a finished AI project
- › Demonstrate academic initiative, technical growth, and commitment
- › Showcase hands-on experience that strengthens college and grad-school applications

04

Build Powerful Networks

- › Connect with mentors, faculty, researchers, and motivated students
- › Gain insights, references, and opportunities for future research and internships
- › Strengthen communication and collaboration skills essential for your career

THE PROGRAM

See it in action

Berkeley
Engineering

Berkeley
Engineering

SHORELIGHT

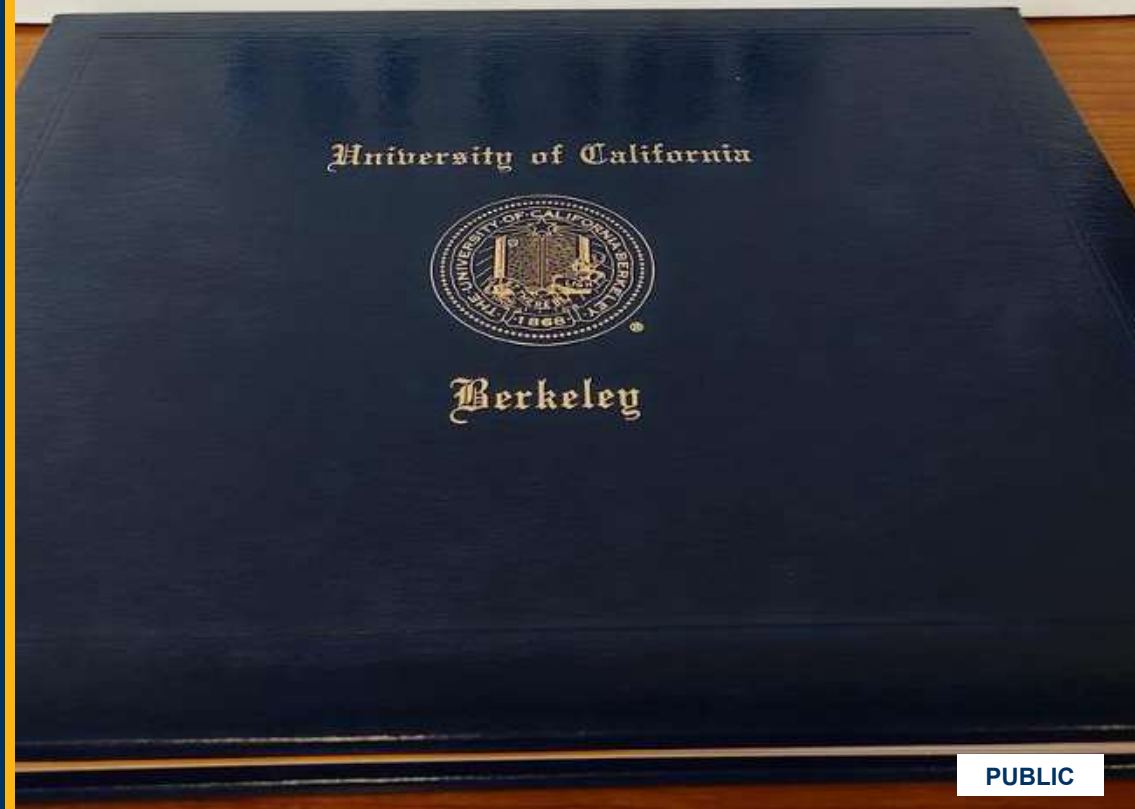
IN COLLABORATION WITH SHORELIGHT

PUBLIC

05

Included in Price

Berkeley
Engineering





PROGRAM COST(Residential)

\$8,750

USD

Housing & Accommodations

UC Berkeley Dormitory with single occupancy and community bathrooms

Linen and towels are included

Meals

Campus dining and packed lunch for outing days; 3 meals a day



PROGRAM COST(Residential)

\$8,750

USD

Program Tuition

Lectures, seminars, workshops

Student Services

Visa support, program supervision, airport transfers, program transportation, welcome packets and insurance

Program Activities

Site visits and social event materials



PROGRAM COST(Course only)

\$6,500 USD

Program Tuition

Lectures, seminars, workshops

Student Services

Visa support, program supervision, program transportation



Safety & Medical Care

- Campus police provide 24/7 security
- Emergency medical services available on campus
- Comprehensive overseas medical and accident insurance
- Professional guides accompany students throughout the program



Outcomes

Upon completion of the program, students will receive:

- Certificate of Achievement and Letter of Completion from UC Berkeley
- Letter of Recommendation available on request*
- Completed Capstone Project to bolster their resume and portfolio

**Provided at the discretion of program faculty*

Sample Certificate of Achievement



Sample Completion Letter



UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO • SANTA BARBARA • SANTA CRUZ

BERKELEY, CALIFORNIA 94720-1780
COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Date: August 12, 2024

From: Professor Tarek Zohdi
Re: xxxxxxxx

To Whom It May Concern :

This letter serves to indicate that [Student Name] was a participant in the Applied AI in Engineering Summer Institute program, which was held in collaboration between Shorelight and the globally renowned University of California, Berkeley, College of Engineering. This intensive two-week initiative, held on the UC Berkeley campus, offers a unique immersion into the world of applied artificial intelligence in engineering.

Throughout the program, XXXXXXXX engaged in a summer experience designed to explore the impact of artificial intelligence in critical areas such as clean and renewable energy, biomedical engineering, advanced manufacturing, and robotics, among others. This initiative stands apart by integrating faculty talks with hands-on projects, providing students the opportunity to engage with experts from one of the top public universities in the US.

[Student Name] actively participated in lectures, seminars, and group projects. This engagement was further enriched by visits to leading technology companies and cultural excursions around the Bay Area, allowing [Student Name] to develop a comprehensive understanding of the field's current and future landscapes.

The experiences and insights gained during the Applied AI in Engineering Summer Institute should position [Student Name] well for their future endeavors. Their engagement is demonstrative of their enthusiasm and potential.

Getting a Visa

Students will need to secure a Visitor Visa (B-2 Tourism) to travel to campus.

Purpose: Enrollment in a short recreational course of study, not for credit toward a degree.

Complete the Online Visa Application

- **Online Nonimmigrant Visa Application, [Form DS-160](#)** – [Learn more](#) about completing the [DS-160](#).

Students must:

- 1) complete the online visa application and
 - 2) print the application form confirmation page to bring to your interview.
- **Photo** – Students will upload their photo while completing the online Form DS-160.

Schedule an Interview

Interviews are required for visa applicants. Students should schedule an appointment for their visa interview at the [U.S. Embassy or Consulate](#) in the country where they live.

06

Registration

Berkeley
Engineering



PUBLIC



Registration Requirements

Criteria	Details
Age Requirement	18+
Degree Level and Transcripts	Enrolled in university or recently graduated from university; Recent transcripts
English Proficiency	IELTS: 6.5 TOEFL: 4.5 PTE Academic: 58 DET: 115 iTEP: 4.5 or equivalent [Students may interview with the admission office for a waiver]
Visa Requirement	B1/B2 Tourist Visa or ESTA

Application Deadline: April 30
Results are available 1-2 weeks after application is completed

How to Register

STEP

01.

Visit our
website

STEP

02.

Select summer
program at your
preferred school's page

STEP

03.

Select 'Apply Now'
to complete the
registration form

STEP

04.

Pay the
program deposit

UC Berkeley
Engineering

Applied AI in Engineering
Summer Institute

[LEARN MORE](#)

Registration
Deadline

April 30, 2027

Berkeley
Engineering

IN COLLABORATION WITH SHORELIGHT

PUBLIC

Application Page

SHORELIGHT

Undergraduate ▾ Graduate ▾ Services ▾ Stories ▾ Events [Login](#) [Find your school](#) 

University of California - Berkeley

Summer Programs ▾

Enrollment dates are not yet available ▾

Ranked among the best engineering schools in the world, UC Berkeley's College of Engineering is the perfect setting for students interested in the future of applied artificial intelligence and innovation in engineering.

Berkeley Engineering

1/7



Frequently Asked Questions

Does my student need to have prior experience in AI to attend this program?

No prior experience is required! Our programs are designed to be inclusive and accessible to all students, whether your background is in business, journalism, the humanities, or STEM. Everyone will find opportunities to learn, grow, and challenge themselves at a pace that's right for them.

My student can't take the TOEFL in time to apply - is this still possible for them to enroll?

Yes, many options are available for English-language leveling. Other tests can be considered, as can English-language academic or interview with the admission office.

What is required for "proof of undergraduate enrollment?"

A transcript, letter from the university, or any other document demonstrating the applicant's enrollment status will suffice.

Does my student have to be already enrolled in the U.S.?

No. Any undergraduate enrollment is adequate.

Find answers to more of our most frequently asked questions [here](#).



Thank You!