

# Berkeley Engineering Design Scholars Program

Jacobs Institute for Design Innovation



Summer 2024 Program Guide

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**Term:** Summer 2024

## **Weekly Meetings:**

Weekly Meetings are on Mondays at 12PM PST

## **Meeting format:**

In-person, 210 Jacobs

# Program Contacts

Janrey Javier, Student Engagement Manager, Jacobs Institute: [janreyjavier@berkeley.edu](mailto:janreyjavier@berkeley.edu)

- Schedule a 1:1 with me: <https://calendly.com/janreyjaviercal/1on1>

Nicole Goridkov, PhD Student, Program Coordinator: [goridkov@berkeley.edu](mailto:goridkov@berkeley.edu)

# Communication Channels

[Jacobs Institute Design Scholars Slack Workspace](#)

[SU24 Design Scholars Google Group](#)

## Summer 2024 Cohort

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## Faculty Advisors & PhD Mentors

Kosa Goucher-Lambert, Assistant Professor, ME: [kosa@berkeley.edu](mailto:kosa@berkeley.edu)

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## Land Acknowledgement

<https://cejce.berkeley.edu/ohloneland>

Berkeley sits in the territory of xučyun.

The Berkeley Engineering Design Scholars Program recognizes that UC Berkeley sits on the territory of xučyun (Huichin), the ancestral and unceded land of the Chochenyo speaking Ohlone people, the successors of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to the Muwekma Ohlone Tribe and other familial descendants of the Verona Band.

We recognize that every member of the Berkeley community has benefitted, and continues to benefit, from the use and occupation of this land since the institution's founding in 1868. Consistent with our values of community, inclusion and diversity, we have a responsibility to acknowledge and make visible the university's relationship to Native peoples. As members of the Berkeley community, it is vitally

important that we not only recognize the history of the land on which we stand, but also, we recognize that the Muwekma Ohlone people are alive and flourishing members of the Berkeley and broader Bay Area communities today.

*This acknowledgement was co-created with the Muwekma Ohlone Tribe and Native American Student Development and is a living document.*

## Program Description & Overview

<https://jacobsinstitute.berkeley.edu/berkeley-engineering-design-scholar-program/>

The Berkeley Engineering Design Scholar Program is a 10-week summer research program open to all continuing UC Berkeley undergraduates in the College of Engineering or with relevant experience in design innovation. The Scholars actively contribute to the growing design ecosystem at UC Berkeley—participating in seminars, workshops, and special events with members of the design community, including their cohort of fellow undergraduate Design Scholars, graduate students, and faculty. In addition, they learn and practice critical skills of making through the Maker Pass program. Scholars also receive a stipend. The per week commitment will fluctuate, but students should prepare to be able to commit at least 20 hours/week towards research.

During the program, each Scholar is matched with a faculty advisor based on their interests, and conducts faculty-guided research in areas such as Engineering Design, Design Methodology, Human Computer Interaction, and Data-driven Design. If there is mutual interest from both the Scholar and faculty advisor, they may have the option of continuing their research beyond the summer.

The program is led by Professor Kosa Goucher-Lambert (Mechanical Engineering), with additional mentorship and project supervision from Professor Hannah Stuart (Mechanical Engineering), and other UC Berkeley faculty.

## Program Values, Goals, and Learning Outcomes

<https://jacobsinstitute.berkeley.edu/about/>

We enable students to **encounter**, **explore**, and **excel** in **designing emerging technologies** to benefit **people** and **planet**.

Working with technologies through the lens of design requires a deep engagement with engineering advances and the needs of society and the environment. Our methodology emphasizes the intertwined nature of technical and human questions at the core of humanity's most pressing challenges.

We believe design is an interdisciplinary and human-centered, inclusive practice that is deeply rooted in principles of equity and access as a basis for excellence. We welcome students, instructors and researchers from all fields and backgrounds to a spectrum of engagements, including:

- **Discovery through Design**, where students gain a critical human-centered perspective and explore the ethical dimensions of design and its relationship to social justice.
- **Proficiency with Design**, where students build confidence and a sense of agency through the development of technical and prototyping skills.
- **Advancement of Design**, where students expand what is known and what is possible through engaging with academic research.

We measure our success through our students' learning and career trajectories as well as their agency and positive influence on communities, at all scales.

**Design scholars will be able to develop fundamental research skills and practices that:**

- Embraces partnership with Jacobs faculty, staff, and students.
- Generates creative problem-solving discoveries relevant to the field of design.
- Enhances self-efficacy in one's abilities and competency.
- Supports current research that addresses current social issues.

#### **Student Learning Outcomes**

- Students will be able to develop meaningful relationships with their peers, faculty advisors, and PhD mentors.
- Students will be able to demonstrate how their research contributes new knowledge towards fields related to Engineering Design, Design Methodology, Human Computer Interaction, and Data-driven Design.
- Students will be able to improve self-efficacy in their research skills.
- Students will be able to connect their research to current events and social justice issues.

## **Program Assessment**

#### **Pre-Program Survey**

#### **Post-Program Survey**

The purpose of these surveys is to capture a holistic experience of the SU24 Design Scholars cohort. Responses are recorded anonymously and data is secured via Qualtrics. Results of the survey will contribute to the holistic evaluation of the program at the end of the summer to determine areas of improvement for student experiences as well as processes within the program. Results may also be used for grant-writing and presented to future donors of the program. Contact Janrey Javier, [janreyjavier@berkeley.edu](mailto:janreyjavier@berkeley.edu), for any questions, comments, or concerns regarding the assessment of this program.

# Program Schedule

[Berkeley Engineering Design Scholars Google Calendar](#)

<b>Week 1</b> <b>(6/3-6/7)</b>	<p>[Monday, 6/3] 12pm-1pm   210 Jacobs Weekly Meeting: Program Kick-off</p> <p>[Tuesday, 6/4] 12pm-1pm   210 Jacobs Specialized Topic: Literature Review 101</p>
<b>Week 2</b> <b>(6/10-6/14)</b>	<p>[Monday, 6/10] 12pm-1pm   210 Jacobs Weekly Meeting: Jacobs Institute for Design Innovation Introduction</p>
<b>Week 3</b> <b>(6/17-6/21)</b>	<p>[Monday, 6/17] 12pm-1pm   210 Jacobs Weekly Meeting: <a href="#">Research Introductions</a> pt. 1</p> <ul style="list-style-type: none"><li>• Pujita Tangirala</li><li>• Wai Han</li><li>• Sheila Mercado</li><li>• Derrick Ng</li></ul>
<b>Week 4</b> <b>(6/24-6/28)</b>	<p>[Monday, 6/24] 12pm-1pm   210 Jacobs Weekly Meeting: <a href="#">Research Introductions</a> pt. 2</p> <ul style="list-style-type: none"><li>• Jasmine Escobedo</li><li>• Orlando Munoz</li><li>• Keira Swei</li><li>• Chetan Goenka</li></ul>
<b>Week 5</b> <b>(7/1-7/5)</b>	<p>[Monday, 7/1] 12pm-1pm   210 Jacobs Weekly Meeting: <a href="#">Specialized Topics</a></p>
<b>Week 6</b> <b>(7/8-7/12)</b>	<p>[Monday, 7/8] 12pm-1pm   210 Jacobs Weekly Meeting: <a href="#">Specialized Topics</a></p>



<b>Week 7</b> <b>(7/15-7/19)</b>	[Monday, 7/15] 12pm-1pm   210 Jacobs Weekly Meeting: <a href="#">Specialized Topics</a>
<b>Week 8</b> <b>(7/22-7/26)</b>	[Monday, 7/22] 12pm-1pm   210 Jacobs Weekly Meeting: <a href="#">Specialized Topics</a>
<b>Week 9</b> <b>(7/29-8/2)</b>	NO WEEKLY MEETING - SUMMER SHOWCASE WORKING WEEK
<b>Week 10</b> <b>(8/5-8/9)</b>	[Monday, 8/5] 12pm-1pm   210 Jacobs Weekly Meeting: Program Wrap-up  [Tuesday, 8/6] 12pm-1pm   210 Jacobs End-of-Program Celebration  DATE TBD [Jacobs Summer Design Showcase] Final Presentations

## Research Introductions

As a scholar conducting research, you should always be prepared to present your research to others. The purpose of research introductions is to encourage you to begin practicing your presentation skills.

Each design scholar is required to construct a 10 minute presentation that introduces who you are, faculty advisor, PhD mentor, your current research project and any progress made so far, as well as goals and deliverables to achieve by the end of the program. There will be a short Q&A after each presentation as well.

## Specialized Topics

- Literature Review 101
- Faculty Panel
- Graduate Student Panel
- Doe Library Resources

- The Division of Equity & Inclusion Data Initiatives
- Office for Protection of Human Subjects

## Special Events

### Summer Design Research Bi-Weekly Seminars

#### Event Details

- TBD

### End-of-Program Celebration

#### Event Details

- Tuesday, August 6th, 12PM-1PM
- 210 Jacobs
- This event serves as an end-of-program celebratory lunch for the Berkeley Engineering Design Scholars program. Faculty, staff, and students will come together once more before the Jacobs Summer Design Showcase to socialize, share the final results of their research and projects, and celebrate with each other in their finished work.

### Jacobs Summer Design Showcase

#### Event Details

- TBD

#### Overview

- Design Scholars will present findings from their research at the Jacobs Summer Design Showcase.
- The showcase will emulate a conference style format; Each of you will have 10 minutes to formally present your research. Be prepared for discussion and Q&A afterwards. Invite mentors, friends, and family to join you at the showcase! It is open to the public.

#### Logistics

- You will be presenting in 310 Jacobs and have access to a projector to display your presentation.
- You are welcome and encouraged to bring any supporting materials, ex. prototypes, posters, etc. Please make note of any needs in the proposal form.

#### Poster Printing

- Having a poster is not required, though we do recommend having some type of visual or interactive demo.



- If you do create a poster: we will cover the cost of [posters printed through JPS](#) for Design Scholars (select the Canon 36" plotter option). There is a turnaround time for poster printing, so be sure to submit your poster file early.

### **Tips**

- Having visual or interactive aids (e.g. video, slides, poster, prototypes, interactive demo) will make your presentation more engaging.
- The showcase presentations will be open to the public, so remember to make your presentation accessible to a general audience.
- Practice your presentation with your mentors/peers before the group presentation.
- Be prepared to provide information and answer questions regarding:
  - Your guiding research question/topic, context for your research area, who was involved with the research (e.g. your mentors), and research methods.
  - Key progress and learnings made during the summer.
  - Possible next steps for this project

# Resources & Support

## CAPS

CAPS offers a variety of mental health services and resources in order to support your academic success and self-development as a student at UC Berkeley.

UHS Counseling and Psychological Services (CAPS) supports the emotional, psychological, educational, social and cultural development of all UC Berkeley students through a wide range of multiculturally based counseling, psychiatric, career, consultation, training and educational services.

## Students with Disabilities

If you have any special needs, please notify me as soon as possible, as well as Disabled Students' Program (510) 642-0518, so that appropriate accommodations can be made. If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible.

## Writing Support

The SLC Writing Program supports Cal undergraduates in their journey to become more persuasive and purposeful writers. Via student-initiated conferences and peer-facilitated workshops, our services seek to embolden students to take ownership of their growth as writers and scholars.

## **Religious Observance**

If you need to miss a weekly meeting due to a religious observance, please notify me regarding the circumstances.

## **Undocumented Students**

The Berkeley Engineering Design Scholars program is a safe space for undocumented students. If you are an undocumented student and you need support, resources, or someone to talk to, please do not hesitate to reach out. You may also connect with the Undocumented Student Program:

<https://undocu.berkeley.edu/>