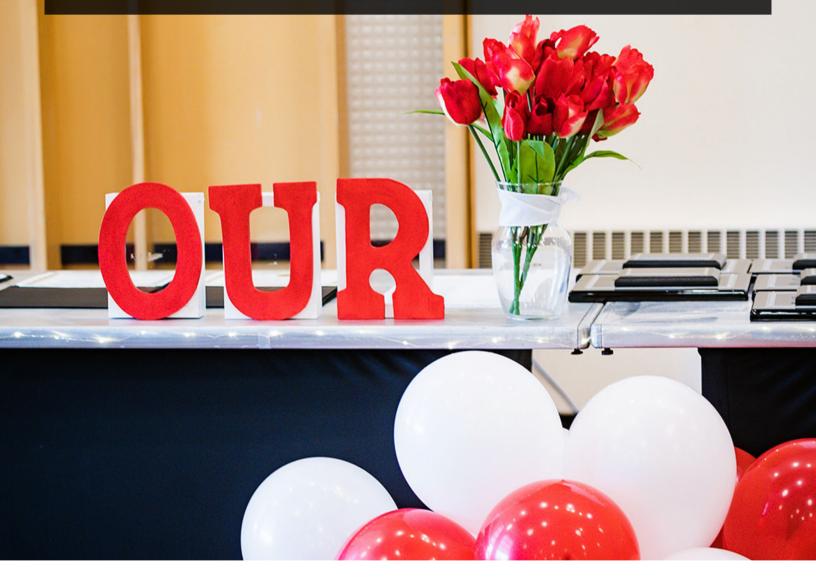
### Office of Undergraduate Research Annual Report

Learning at the Cutting Edge of Research





October 2022

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#### **Undergraduate Studies**

From admission to graduation, the units of the Office of Undergraduate Studies at the University of Utah provide every student with an exceptional educational experience that empowers them to lead transformational lives wherever their educational and professional futures take them.



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#### **OUR Brief Story**

Office of Undergraduate Research is housed in Undergraduate Studies at the University of Utah. In 1987, the Undergraduate Research Opportunities Program (UROP) was launched. In 2012, the program officially became the Office of Undergraduate Research. In 2021, the OUR hired its first woman of color Associate Dean of Undergraduate Studies and Director of the Office of Undergraduate Research, Annie Isabel Fukushima. OUR is committed to supporting all undergraduate researchers at the University of Utah by collaborating with faculty and staff of the 18 colleges, units within Undergraduate Studies, the Office of the Vice President for Research (VPR), Equity, Diversity & Inclusion, and other offices across campus. OUR is a leader in fostering R1 commitments to innovation and research through supporting faculty collaborations with undergraduate researchers. As a leader in undergraduate research in the state, OUR fosters partnerships with Utah System of Higher Education institutions.

### **OUR Mission**

The mission of the University of Utah Office of Undergraduate Research is to facilitate and promote undergraduate student-faculty collaborative research and creative works in all disciplines throughout the University of Utah campus through equitable programming, diverse representation, and social justice.



### **OUR Team**

#### Annie Isabel Fukushima, Ph.D

Associate Dean, Undergraduate Studies Director, Office of Undergraduate Research

#### Gauri Garg

Undergraduate Research Leader

#### **Cindy Greaves** Program Manager

Megan Shannahan Academic Program Manager

Sandra Luo Undergraduate Research Advisor

Shiver Academic Program Manager

**Emi Wickens** Undergraduate Research Leader Undergraduate Research Leaders 2022 - 2023 Joshua Chang Mary Fairbanks Gauri Garg Eliana Massey Melika Moeinvaziri Sophie Stephens Sarthak Tiwari Emi Wickens

#### Undergraduate Research Leaders 2021 - 2022 Daniel J Anderson Gauri Garg Emmalyn Irvin Henry Ponce-Orellana Emi Wickens

### OUR Data in Brief 2021 - 2022

- 596 Students Funded (UROP, SPUR, Scholarship & Travel & Small Grants)
- 399 Research Mentors
- 582 Student Presenters (URS, ROCH, UCUR, NCUR)
- 116 Published in the OUR Journal
- 429 Students Received Research Advising
- 1,787 Attendees of the Undergraduate Research Education Series
- 1,045 People Reached In-Person
- 232,216 People Outreached on Social Media

### **Objective O1.** Enhancing the Teaching, Learning, Research, and Innovation Environments



& Awards

#### Grants & Awards for Undergraduate Research

- Undergraduate Research Opportunities Program (UROP)
- Summer Program for Undergraduate research (SPUR)
- Small and Travel Grants
- Scholarships

OUR enhances the teaching, learning, research and innovation environments by funding undergraduate researchers to work with a faculty mentor. During the 2021 – 2022 academic year, OUR funded 596 undergraduate researchers at the University of Utah.



#### **Recognition of Undergraduate Research Excellence**

- Undergraduate Research Scholar Designation
- Outstanding Undergraduate Researcher Awards (OURA) Ceremony

In pursuit of excellence, we recognize outstanding undergraduate researchers during an annual awards ceremony that comprises of recognizing the Outstanding Undergraduate Researcher Awardee, scholars funded by OUR in partnership with our donors of the Dee Foundation, the Francis Family Fund, and the Parent Fund.



#### **Research Advising**

OUR provides research advising to students at all stages of their research journey.



Faculty & Student Collaborations

#### Support Faculty & Student Collaborations

- Summer Program Partnerships
- OUR Program Partners
- Faculty Affiliates

Central to OUR activities and programming: supporting faculty and student partnerships.

#### **Research Education & Educational Outreach**

- Undergraduate Research Education Series (URES)
- Undergraduate Research Symposia (URS) Fall (On-line) and Spring (In-person), Summer (In-person)
- Utah Conference on Undergraduate Research (UCUR), and the National Conference on Undergraduate Research (NCUR)
- Research on Capitol Hill (ROCH)
- Undergraduate Research Journal

The learning environment is further enhanced with educational opportunities through the Undergraduate Research Education Series where students attend educational workshops that will enhance their knowledge about doing research.

OUR fosters research innovation through publication and student presentations. Additionally, students are eligible to receive a research designation in their transcript pending the completion of two semesters of research, presentation of their findings at an Undergraduate Research Symposium, and publication of an abstract or excerpt of their work in the Undergraduate Research Journal.

OUR organizes multiple opportunities for students to present their research: the Undergraduate Research Symposia (semester-based), Research on Capitol Hill, and Utah Conference of Undergraduate Research.



Education & Outreach

### **Grants & Awards**

2021 - 2022 Academic year

Between 2021 and 2022, the Office of Undergraduate Research funded approximately 600 student researchers with Undergraduate Research Opportunity Program (UROP), Summer Program for Undergraduate Research (SPUR). travel and small grants, and scholarships.

Undergraduate researchers funded by OUR represent a diversity of majors. These majors represent research fostering civic responsibility and quality of life for Utahns, including STEM fields, health and medicine research, research on global issues, research on equity and diversity, and research in environmental studies.

#### Research, Civic Responsibility, & Quality of Life - Supporting Diverse Majors

2015-2022\*

2,636	1,091	272
STEM	Health & Medicine Research	Research on Global Issues

#### 172 Research on Environmental Studies

#### 82

Equity & Diversity Research

\*Numbers based on majors—more students may study these topics. Currently there isn't a systematic way to capture the data beyond major.

The average number of students funded over the past 7 years: **644 per year** Total funded since 2015: **4,513** 

### Undergraduate Research 483 Opportunity Program (UROP)

In 1987, the Office of Undergraduate Research was founded with the creation of UROP (Undergraduate Research Opportunity Program). UROP student researchers work with a faculty mentor, where 18 colleges participate in mentoring UROP scholars. In 2021 – 2022, 483 scholars received a \$1,200 taxable stipend for their research experience. UROP is awarded every semester. UROP scholars receive research advising, attend the Undergraduate Research Education Series (workshops and presentations), and present their findings at the Undergraduate Research Symposia. UROP scholars successfully meet OUR learning objectives regarding working collaboratively, identifying appropriate methodologies, utilizing previous research, effectively presenting research, articulating research questions, meeting field standards for responsible research and reflecting on research.

"My undergraduate research experience has enhanced my passion for research and motivated me to apply to graduate school, to continue in science and find answers to the scientific questions I'm most interested in. Aside from that, I think that everyone should try out a bit of research experience, even if they don't plan on attending graduate school or other post-bac professional schooling. I enjoy the collaboration between undergrads, grad students, post-docs, and professors (it boosts my confidence in what I do), as well as the fun environment of leading a research project." -UROP Scholar.

"As a UROP student, I have learned so much about problem-solving and experiment design. I have gained an understanding of how to respond to challenges and assure that all goals are met" —UROP Scholar, Junior, Chemical Engineering

"Exposure to undergraduate research is one of the primary reasons I chose to attend the U of U. Not only has my participation in research taught me a lot about what future career paths may interest me most, but it's raised my confidence levels immensely

-UROP Scholar, Junior, Chemistry

### **UROP Successful Learning** Outcomes

OUR's UROP is successful because of the learning outcomes demonstrated in participants. This data is collected every semester in a close-out report submitted by participants and their faculty mentors.

#### **UROP** Scholars agree: because of the research experiences, they can:

96%	98%	98%	87%
Work collaboratively with other researchers	Identify appropriate methodologies	Identify & utilize previous research	Effectively present research
97% Articulate a research question or creative objective	97% Meet the fields standard for responsible conduct in research	98% Reflect on research and make future plans because of this experience	417 Students Completed Closing Report

#### UROP mentors agree: because of the research experience, their mentees are able to:

#### 96%

#### 96%

Identify appropriate methodologies

Identify & utilize previous research

#### 97%

Articulate a research question or creative objective

#### 99%

Meet the fields standard for responsible conduct in research

#### 90%

Effectively present research

#### 97%

Reflect on research and make future plans because of this experience

#### 99%

Work collaboratively with other researchers

#### 69

Mentors Completed **Closing Report** 

Likert Scale self-reporting: Strongly Disagree to Strongly Agree

# Summer Program45for UndergraduateSPURResearch (SPUR)Scholars

Summer Program for Undergraduate Research provides students with a competitive summer research experience where students are paid for 10 weeks to immerse into a fulltime summer experience with a faculty mentor. Students come from across the United States. Students participating in SPUR successfully acquire OUR learning objectives where they are able to articulate a research question or creative objective; Identify appropriate methodologies; Identify & utilize previous research; Meet the fields standard for responsible conduct in research; work collaboratively with other researchers; effectively present research and make future plans because of this experience. To successfully support Summer Programs, OUR collaborates with campus partners.



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#### 181 Students

Summer Program Partners

- The Beckman Scholars Program
- Chemistry Research Experience for Undergraduates (REU)
- Genomics Summer Research for Minorities (GSRM) Internship
- Native American Summer Research Internship (NARI)
- PathMaker Scholars Cancer Research Program
- Pathology Summer Program
- Physics & Astronomy REU
- Research Experiences to Advance the Careers of HBCU Undergraduates at the University of Utah (REACH U2) in Health Disparities Research
- Research Experience in ALpine Meteorology (REALM) REU
- Research Experience in Utah for Sustainable Materials Engineering (ReUSE) REU
- RUUTE Summer Undergraduate Research Experience (SURE)
- Summer Program for Undergraduate Research (SPUR)
- Summer Undergraduate Research Internship in Pharmaceutics and Drug Delivery

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Faculty

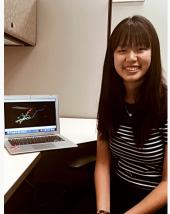
### **Building Skills with SPUR**

"I entered the program thinking of research as a box that I needed to check. I would always think to myself, "I want to be a clinician, research is just one more thing I have to do to get there." However, SPUR has opened my eyes to the fact that research is not only beneficial, but in my opinion absolutely necessary for anyone that wants to pursue a career in this field. I feel that by spending time here I have a far better grasp on the techniques and theories behind what I will hopefully do someday. And on a personal note, this has been so much fun! ... this was an amazing opportunity to freely investigate my interests while also exchanging enthusiasm and curiosity with my peers. This has been a truly incredible experience that has opened broadened my horizons." –Senior, Health, Society, and Policy, SPUR Scholar









### SPUR: Excelling in Learning Achievement

OUR's SPUR is successful because of the learning outcomes demonstrated by participants. Participants (Mentors and mentees) submit a closing report after the end of the summer experience.

#### SPUR Scholars agree: because of the research experience, they now can:

96% Identify appropriate methodologies

Identify & utilize previous research

100%

100% Effectively present research

94%

#### 100%

Work collaboratively with other researchers

#### 96%

Articulate a research question or creative objective 94% Meet the fields standard for responsible conduct in research

Reflect on research and make future plans because of this experience 98%

SPUR Scholars Completed Closing Report Total of 45 SPUR Mentees 2021

### **100% SPUR mentors agree:** because of the research experience, their mentees are able to:

#### 46%

Mentors Completed Closing Report Total of 41 SPUR Mentors 2021

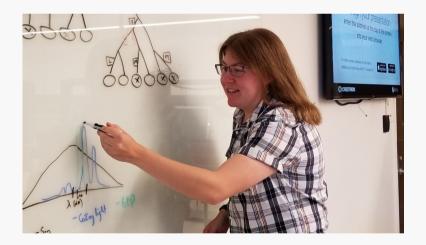
- Articulate a research question or creative objective
- Identify appropriate methodologies
- Identify & utilize previous research
- Meet the fields standard for Responsible conduct in research
- Work collaboratively with other researchers
- Effectively present research
- Make future plans because of this experience

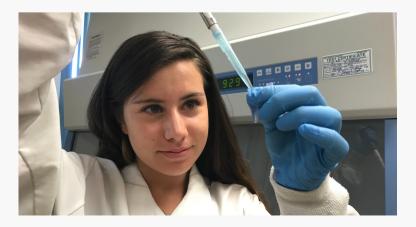
Likert Scale self-reporting: Strongly Disagree to Strongly Agree

### Travel & Small Grants

#### 48 Travel & Small Grants

OUR recognizes that essential to supporting undergraduate research is providing students with opportunities to travel to research sites and student participation in a national conference. Additionally, students may not have the resources needed to support their research. Therefore, every month the OUR reviews student applications for travel and small grants. In collaboration with student evaluators (the Undergraduate Research Leaders), the OUR funds students for travel and small grants. In the fall 2021, under new leadership the OUR increased small grants from \$250 to \$500. Students could request up to \$500 in travel and small grants.







#### Recognition 2021 - 2022 Academic year OUTSTANDING UNDERGRADUATE RESEARCHER AWARDS

The 2022 OUR Awards Ceremony was hosted for the first time as a hybrid event. Video content recognizing donors was created and the event was live-streamed. Coverage of the ceremony and week-long activities of undergraduate research events, including the Undergraduate Research Symposium, appeared in <u>@theU</u>.

37 Students Recognized

17 Colleges & OUR Awardees





#### **2022 OUTSTANDING UNDERGRADUATE RESEARCHER AWARDEES**

Listed alphabetically by college

Samantha Eddy (Mentor: Professor Shundana Yusaf) **College of Architecture & Planning** 

Rachel Nelson (Mentor: Professor Sankar Srinivasan) **David Eccles School of Business** 

Joshua Christensen (Mentor: Professor Lisa Diamond) School for Cultural & Social Transformation

Sophia Boehler (Mentor: Professor Melodie Weller) **School of Dentistry** 

Sarah Orozco (Mentor: Professor Veronica Valdez) **College of Education** 

Katrina Le (Mentor: Professor Thomas Zangle) **College of Engineering** 

Comstock (Mentor: Professor Brian Snapp) **College of Fine Arts** 

Abby Laskey (Mentor: Professor Jeffrey Rose) **College of Health**  Casey McFarland (Mentor: Professor Jennifer Alderden) **Honors College** 

McKay Muhlestein (Mentor: Professor Natalya Kuznetsova) **College of Humanities** 

Kailee Ferret (Mentor: Professor Leslie Francis) **S.J. Quinney College of Law** 

Avery Abelhouzen (Mentor: Professor Joseph Yost) **School of Medicine** 

Alex Dzubay (Mentor: Professor. Kristine Pankow and Jeff Moore) **College of Mines & Earth Sciences** 

Kari Stoddard (Mentor: Professor Lisa Taylor Swanson) **College of Nursing** 

Macey Smith (Mentor: Professor Amy Barrios) **College of Pharmacy** 

Elijah Counterman (Mentor: Professor Sean Lawley) **College of Science** 

Emmanuel Diaz (Mentor: Professor Katie Baucom) **College of Social & Behavioral Sciences**.

### **Scholarships**

OUR is successful because of the donors supporting our scholarships. For the 2021 - 2022 year, OUR awarded 20 students scholarships. Undergraduate Studies OUR is supported through a variety of state and private funds. Donors include the Lawrence T. Dee and Janet T. Dee Foundation, Francis Family Foundation and the Parent Fund. Scholarships The Monson Family Fund supports the Monson Essay Prize. OUR recognized our generous donors and supporters during the Outstanding Undergraduate Research Award Ceremony on April 4, 2022.

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### **Francis Family Fund Scholarship**

The John A. and Irene F. Francis Endowment Fund was established by John A. Francis in memory of his wife, Irene F. Francis, and to acknowledge the work of his son, John G. Francis, professor of political science at the University of Utah. The Francis Endowment Fund recognizes outstanding undergraduate researchers in the arts, social sciences, and the humanities.

- **Cloe Butler** (Mentor: Ana Antunes, Transform)
- Kendal Chatard (Mentor: Tim Webster, Social & Behavioral Science)
- Shaistah Din (Mentor: Marissa Diener, Social & Behavioral Science)
- Gauri Garg (Mentor: Adam DeHavenon, Medicine)
- Wyatt Hudgens (Mentors: Jim Curry and Juliet Carlisle, Social & Behavioral Science)
- Sarah Orozco (Mentor: Veronica Valdez, Education)
- **Sohyun Park** (Mentor: Annie Isabel Fukushima, Transform)
- Madeleine Sorenson (Mentor: Rebecca Utz, Social & Behavioral Science)

### Dee Foundation Scholarship

The Lawrence T. Dee and Janet T. Dee Foundation was established by Lawrence Taylor and Janet Teller Dee in 1971 for the purpose of promoting charitable activities in Ogden and the surrounding area. It remains a family foundation dedicated to furthering the growth and well-being of the people of northern Utah.

- Elle Gaudette (Mentor: Peter Fino, Health)
- Heather Graham (Mentor: Kim Hackford-Peer, Transform)
- Anika Isom (Mentor: Ben Christensen, Medicine)
- Madeline Jensen (Mentor: Ram Goel, Science)
- Kai Pruyn (Mentor: Tommaso Lenzi, Engineering)
- Madeleine Sorenson (Mentor: Rebecca Utz, Social & Behavioral Science)
- Zakary Wankier (Mentor: Sarina Sinclair, Medicine)

### Parent Fund Scholarship

The Parent Fund is sustained by parents and supports studentcentered programs and initiatives. The Parent Fund plays an integral role in the University of Utah's ability to provide students with exceptional opportunities inside and outside the classroom.

- Pooja Annigeri (Mentor: Nitin Phadnis, Science)
- Abby Citterman (Mentor: Jake George, Engineering)
- Dillon Fehlau (Mentor: Tao Gao, Engineering)
- Lauren Hulse (Mentor: Nitin Phadnis, Science)

### **Monson Prize**

The Charles H. Monson Essay Prize honors Charles H. Monson Jr., a distinguished member of the University Philosophy Department from 1958 to 1974. Professor Monson earned both his bachelor's and master's degrees from the University of Utah and received his Ph.D. from Cornell University. During his years at the University, he served as chair of the Philosophy Department and Associate Vice President for Academic Affairs. He received the University's Distinguished Teaching Award in 1970. In his honor, an annual prize is awarded to an undergraduate who writes an outstanding paper on a subject having to do with social change (the application includes submission of an original piece of work that is 5-20 pages in length).

#### 2022 Monson Prize Awardee

Kassie John (Professor Elpitha Tsoutsounakis, College of Architecture & Planning) DINÉ BIZAAD LANGUAGE CUBES: EXAMINING THE REFORMATION OF INDIGENOUS LANGUAGE PRESERVATION



"Language is key to understanding cultural values and imperative to sustaining a community's cultural identity. Diné Bizaad Language Cubes explore ways to redesign how the Diné language is taught and preserved for my Diné. This design research project was an opportunity to 'protect' my Indigeneity (ways I identify as an Indigenous person) and to help 'contain' the Diné language for future generations to come. Diné Bizaad Sound Cubes is a tool for Diné youth and their communities to initiate their own "play" while aiding in the development of initial phonemes with Diné Bizaad pronunciation, reclaiming our pre-colonial ways of language acquisition through oral teachings" -Kassie John, Monson Prize Awardee 2022

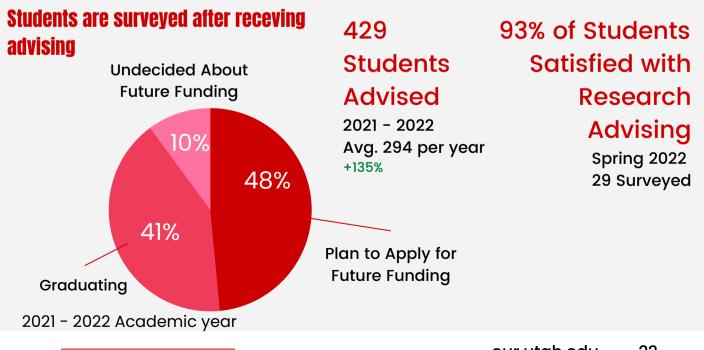


OUR provides research advising. Staff and peer mentors connect students to opportunities, assists students with questions they have about applying for funds, or how they may go about finding an opportunity. During the spring 2022, OUR implemented mandatory advising for UROP scholars, growing the number of advising appointments by 135%. Overall, students are satisfied with advising, with nearly half planning on applying for funds again and 41% graduating, therefore, no longer eligible for future funds.

"I was thoroughly surprised how helpful the advising meeting was! At first, I was bothered by having an added requirement, as I am already a very busy and stressed person. But once I began talking to [the research advisor], I realized how easy and simple of a task it was, and just how helpful it could be." –Research Advisee, Biology

"[The advisor] was very nice and enthusiastic when talking about my research project. She also shared lots of resources with me regarding diversity/POC funding or events to get involved with. As a POC this was super helpful and until my conversation with her I didn't know about those resources. She's awesome!" – Research Advisee, Speech and Hearing Science senior (class of 2022)

"I definitely gained a sense of belonging in the research realm thanks to [OUR research advising]." –Research Advisee, Ethnic Studies senior" (class of 2022)



### Research Mentoring Relationships



#### 399 Mentors Co

18 College Partners

#### 232 Reviewers

Faculty mentors are central to fostering student success in undergraduate research. Every year, the Office of Undergraduate Research works with faculty and staff mentors where they serve as research mentors on projects or as reviewers of student applications. To support faculty-student mentoring relationships, during the 2021 – 2022 academic year, OUR expanded the Summer Program Partnerships.

The Office of Undergraduate Research announced the creation of the OUR Programs Partnership in spring 2022. To grow opportunities for faculty, staff, and undergraduate researchers to learn about opportunities and potential cross campus collaborations, OUR Program Partners meet 4 times a year.

OUR Program Partners:

- Are funded internally or externally to conduct research
- Collaborate with undergraduate researchers
- Encourage a team-oriented research process (team may include faculty, staff, and students)

2021 - 2022 activities supporting partners:

- Support with grant applications
- <u>Hiring and Onboarding Undergraduate researchers</u>
- <u>Collaborating with Undergraduate Researchers at the U</u>
- Field research information
- <u>Remote Undergraduate Research Mentoring guidelines</u>



### Education & Presentation Opportunities

OUR provides students opportunities to present their research findings. This includes presenting at the Undergraduate Research Symposia (every semester), Research on Capitol Hill, and at a state or national conference (Utah Conference for Undergraduate Research and the National Conference for Undergraduate Research. Due to the global pandemic, symposia event participation was lower than previous years.

To supplement educational content, OUR also provides the Undergraduate Research Education Series. To accommodate remote learning, all events were offered online and during the spring semester of 2022, as hybrid events. OUR witnessed a growth in participation with online education due to the availability of remote participation.

50 UCUR / NCUR Presenters Funded 497 Undergraduate Research Symposia Presenters 24 Participants in Research on Capitol Hill

#### 1,787

#### **Education Series Total Attendees**

### **Undergraduate Research Education Series (URES)**

#### 1054

733

2021 - 2022

#### In-Person Attendees Virtual Attendees 2021 - 2022

The First Undergraduate Research Education Series was hosted in fall 2014. Beginning in the Spring 2022, sessions were categorized by tracks to help students identify which event would be useful for their research goals.

To foster greater on-demand participation online, OUR has working with University Marketing been З Communications (UMC) to renovate the website to create a more user friendly interface with easy access for visitors to engage with OUR educational content.

#### 28 Sessions

2021-2022

- 19 **Research Basics & Skill building**
- Social Justice & Ethics 9
- Research Collaboration & Communication 13
- 9 Careers & Research

"I really enjoyed the seminar series. They provided incredibly helpful advice, especially for me as I was applying to graduate school this semester" -URES Attendee, Senior, Biology

"I really like the undergraduate research event series. The presentations I watched were highly educational. I've found each of them very applicable and inciteful in starting out my career as a researcher"

-URES Attendee, Senior, Atmospheric Sciences





### Undergraduate Research Symposium (URS)

The First Undergraduate Research Symposium was hosted during the Spring of 2004. The OUR Undergraduate Research Symposium provides an opportunity for University of Utah students to present their work in a scholarly setting to students, faculty, and other members of the U community. Undergraduate students from all disciplines at the University of Utah are invited to present their research and creative work. For spring 2022 OUR organized the first return to in-person events while supporting virtual presentations as well. To increase diverse participation, the symposium is offered for all three semesters: summer, fall, and spring. OUR Spring 2023 will be organized in partnership with UCUR 2023 and will occur earlier in the semester.



Summer 2021 202 presenters <u>Virtual</u> on Gathertown

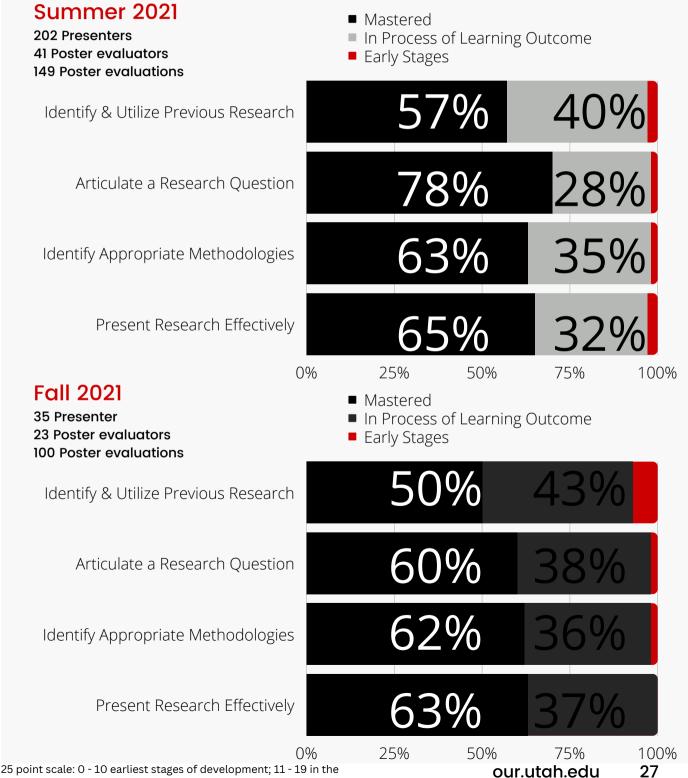
Fall 2021 35 presenters Virtual

Spring 2022 260 presenters in-person & virtual

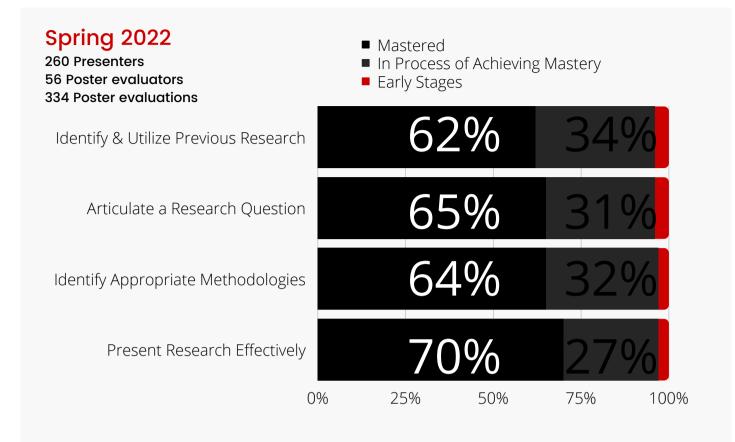
"I am so happy to have gotten the chance to work with your esteemed faculty and staff" —SPUR Scholar, 2021

### Symposium Poster Evaluation– Advancing Learning Outcomes

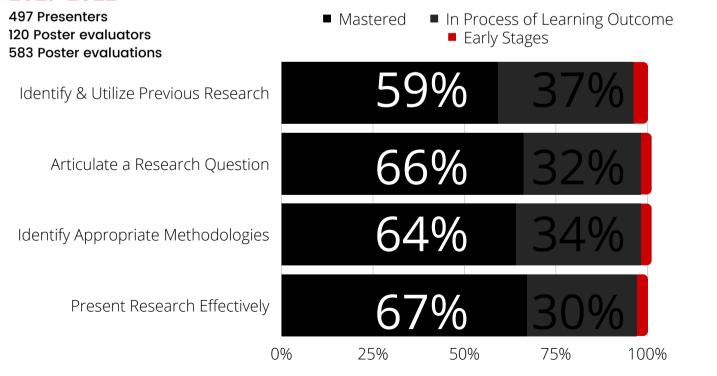
Every semester OUR hosts research symposia. Faculty, staff and graduate students across the University of Utah campus serve as poster evaluators of the symposia.



process of learning the outcome; 20 - 25 - mastered learning outcome



#### 2021-2022



25 point scale: 0 - 10 earliest stages of development; 11 - 19 in the process of learning the outcome; 20 - 25 - mastered learning outcome

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125

### **Research on Capitol Hill (ROCH)**

#### February 8, 2022 24 presenters

The Office of the Vice President for Research, the Office of Government Relations, and the Office of Undergraduate Research select students each year to exhibit their work via posters to Utah State legislators. State legislators are invited to attend the poster presentations, where students receive guidance on how to speak with state representatives about their research. ROCH demonstrates the importance of undergraduate research and creative work from the top two research universities in this state: University of Utah and Utah State University. The first ROCH was hosted at Capitol Hill in 2000. Legislators are invited by vice president Jason Perry and Natalie Tippets (Office of Government and Relations), to learn more about RI research and the vital role state funds have in fostering the future of Utah. On March 2nd, at the invitation of interim vice president for research Erin Rothwell, undergraduate researchers Madeleine Sorenson and Gauri Garg presented to faculty and campus leadership about their experiences presenting at ROCH.



### Utah Conference on Undergraduate Research (UCUR)

### 61 presenters funded by OUR at UCUR and NCUR

The 16th annual Utah Conference on Undergraduate Research (UCUR) was hosted at Utah Tech University (formerly known as Dixie State University). In 2007, the first UCUR was hosted at University of Utah and returns to the U in 2023. University of Utah is hosting UCUR 2023 with cochairs: Annie Isabel Fukushima, Cindy Greaves, and Megan Shannahan. In partnership with Undergraduate Studies, college partners across the campus, and the VPR Office, UCUR 2023 promises to be a successful event with student participants from USHE institutions.



### **Undergraduate Research Journal**

1161497ContributionsCollegesFaculty Mentors

2022 marks 22 years of undergraduate research publications with the Office of Undergraduate Research Undergraduate Research Journal. In volume 22, the diverse research titles reflect the depth of research. Undergraduate research is fostered through a will to find an answer to a research question, presenting findings to receive feedback, mentoring relationships, and the application of research. Publishing undergraduate research projects in this journal provides a window into the high impact practice of mentoring the future of research. The fall 2022 Undergraduate Research Journal issue highlights hope, curiosity, and endeavors to resolve to find solutions to contemporary and historical pressing questions.

### Undergraduate Research Scholar Designation (URSD)

The Undergraduate Research Designation was 2006. The Undergraduate created in fall (URSD) Research Scholar Designation recognizes a student's commitment to their development as a researcher during their undergraduate career. The designation appears in the awards section of the transcripts for graduating students. URSD awardees receive a white research cord from the Office of Undergraduate Research to wear at convocation and commencement.

<mark>136</mark> URSDs

### **OUR Outreach**

The OUR accomplished through outreach and research advising. OUR outreach includes tabling and classroom presentations. Beginning in the spring of 2022, OUR events returned to in-person after a hiatus with remote programming to foster public health concerns regarding COVID-19. The shift to virtual options during the pandemic created an opening for adapting outreach activities. The office increased its social media presence and is reaching more students via Twitter, Instagram, Facebook, and email. In partnership with Anne Dibble (Undergraduate Studies Communications), OUR was able to revamp its social media assets to promote content online.

#### 31 Events Attended for Outreach 2021 - 2022

Average 65 per year

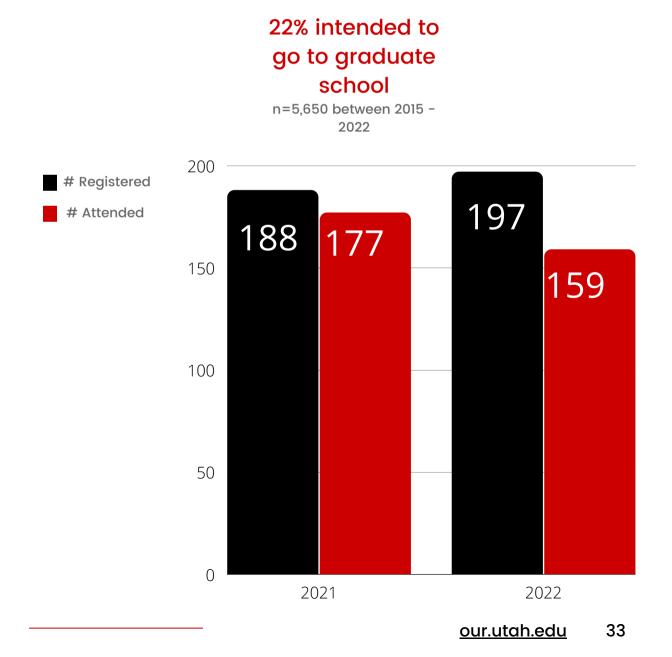
#### 1,045 Reached In-Person

(Tabling at Events and Classroom presentations) 2021 - 2022 Avg. 1,744 per year

> 231,216 Outreached on Social 2021 - 2022

## **Objective O2.** From Graduation to Graduate School

A central goal for OUR is to provide an undergraduate to graduate school pipe-line. For the past 4 years, OUR has supported graduate school aspirations in undergraduate researchers by co-hosting the "Graduate School Mini Expo" as part of its summer programs. On June 23, 2022 the most recent Mini Expo was hosted as part of summer events. The Mini Expo is a partnership between OUR Summer Programming, OUR Summer Program Partners, and the Graduate School.



### OUR & Graduation

#### 4.28 Average Years

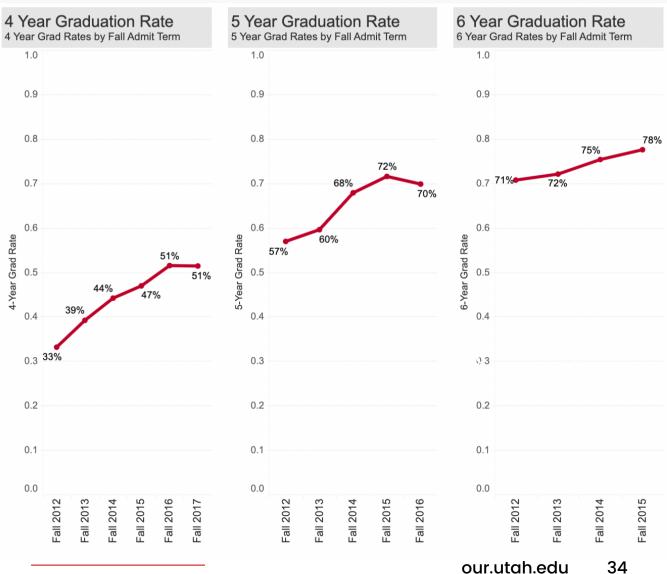
#### 83% Graduated

to Graduate Avg Since 2015 Participants Who Graduated

n=5,650 unique participants

OUR Students graduate in 4.28 years, showcasing that students who participate in research are more likely to complete closer to 4 years.

Data reflects all OUR programs and activities: UROP, SPUR, URS, URES, and Advisees.



### **Objective O3**. Diversity in Research & Early Academic Support

OUR students experience undergraduate research across their academic journey, from first year to graduation, with a majority of undergraduate researchers accessing opportunities in the third and fourth year of their academics. 7% of OUR funded students (Funding: UROP, SPUR, URL, Travel & Small Grants) are in their 1st or 2nd years of their academics. This means, the program is successful in supporting students as they advance in their academics. OUR fosters equity in access through research and diversity of participants by:

- Offering a course designed for early undergraduate students
- Funding first and second year students
- Supporting diversity in undergraduate researchers accessing opportunities

### **Undergraduate Studies 2950**

Spring 2021 & 2022 <b>39</b>	100%	100%
Students	Satisfied	Recommend
Registered	with the	the
31% Completed Course Evaluation	Course	Course

Beginning in the spring 2021, Undergraduate Studies offered the first time ever, UGS 2950—Undergraduate Research Experience asynchronous online course. The course was designed by and taught by Dr. Anne Cook during the spring 2021 and 2022. The course fulfills general education requirements: Applied Sciences [AS] and Social & Behavioral Science [BF]. Content students experience includes research fundamentals and skill building for research.

# Supporting Diversity & Equity in Undergraduate Research

In order to promote equity in learning and research, it is essential for OUR to capture racial and gender student diversity. OUR added a new question to Undergraduate Research Opportunity Programs, where mentors now respond to how a mentee's research contributes to diversity in research.

Diversity in research includes diverse fields of study, subjects of research, and diverse teams. The OUR is committed to supporting diversity in research. Students of color, including American Indian, Alaskan Native, Asian / Asian American, Black / African American, Hispanic or Latine, Multiracial and Pacific Islander constitute the diverse students of color accessing the programs. Additionally, the Office is proud of its support of gender diverse students where a majority of the programs support gender minorities and women. Additionally, 25% of OUR participants are transfer students, students who are more likely to be first generation, pell eligible or students of color.

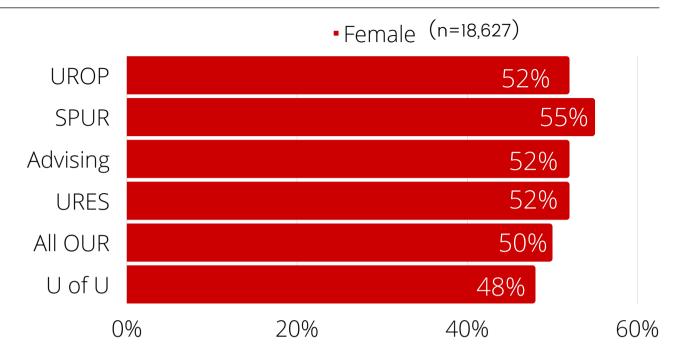
#### Participants Race (2015 - 2022)

### OUR Participants 31.9% BIPOC\*

Racial demographics 2015 - 2022

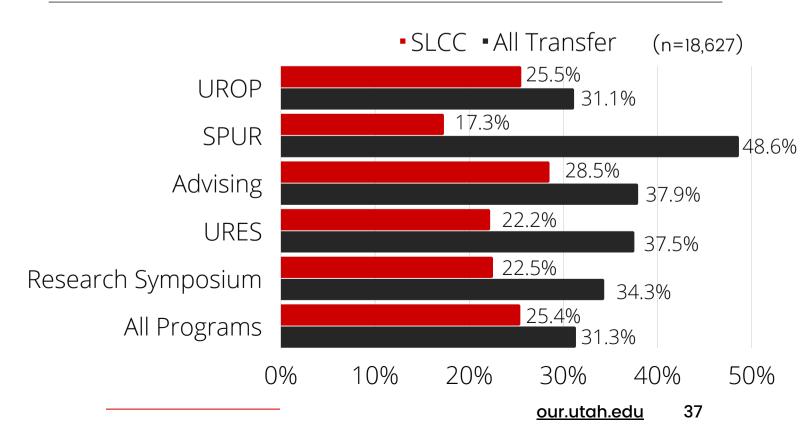
n=18,627 participants BIPOC: Black, Indigenous, and People of Color including Mixed-Race, Hispanic/Latine, Pacific Islander

# Gender Identities of Participants (2015 - 2022)



Please note: gender-minorities, gender-non-conforming students participate in OUR programs. However, the above data is collected from OBIA.

# Transfer Students (2015 - 2022)



# **Objective 04.** Grant Application & Fundraising Efforts

Central to a robust organization are efforts to diversify resources. The Office of the Vice President for Research, state funds, central funds from the University, private donors, and foundations support OUR. OUR participated in the March 21, 2022 #UGivingDay. Additionally, associate dean Fukushima wrote letters of support for 6 external grants submitted by faculty at the University of Utah, reflecting efforts to encourage more faculty applying for external grants by including undergraduate researchers in their budgets.

The OUR is also pursuing federal grant opportunities to diversify the funding supporting the office, students, and faculty collaborations.

# OUR 2022 - 2023 Goals

# **Data-Informed Decisions**

- Understand trends with first-generation and Pell-eligible participants.
- Learn more about diversity of students participating in research activities and taking research courses at the U.
- Create a research attribute to follow trends of courses that offer undergraduate research that then lead students to participate in research opportunities (paid and unpaid).

# **Grow Research Inclusion**

- Grow number of participants from diverse backgrounds of first generation, students of color (in particular Latinx and Pacific Islander), gender minorities, low-income, and 1st and 2nd-year students in accessing opportunities.
- Grow diversity in mentors and strengthen partnerships with existing mentors.

# Strengthen Mentoring Partnerships and Collaborators

- Faculty Affiliates of OUR. During the fall of 2023, OUR launched the faculty affiliates which makes visible on the OUR website OUR mentors with UROP and SPUR.
- OUR Mentor Award. OUR is partnering with leadership within Undergraduate Studies to create the Outstanding Undergraduate Researcher Mentor Award (OUR Mentor Award). More coming about this opportunity to recognize faculty mentors.

# **Closing with Gratitude**

Acknowledgement: The Office of Undergraduate Research acknowledges that this land, which is named for the Ute Tribe, is the traditional and ancestral homeland of the Shoshone, Paiute, Goshute, and Ute Tribes. The University of Utah recognizes and respects the enduring relationship that exists between many Indigenous Peoples, American Indian, Native people, and their traditional homelands. We respect the sovereign relationship between tribes, states, and the federal government, and we affirm the University of Utah's commitment to a partnership with Native Nations and Urban Indian communities through research, education, and community outreach activities.

There are many people to appreciate for their commitment to undergraduate research at the University of Utah. Appreciation to Undergraduate Studies leadership and staff: Chase Hagood, Anne Dibble, Mark St. Andre, Hunter Moreton, Lisa Nemelka. Dannielle Moriondo, Robert White, Jim Agutter, Debbie Matticks, Monica Kohler, Nicole Batt, Undergraduate Studies Interns, Cindy Greaves, Megan Shannahan, Shiver, Sandra Luo, and OUR Undergraduate Research Leaders of 2021-2022. OUR is also appreciative of our partners and the many threads that comprise the Office of Undergraduate Studies, including, but not limited to: Academic Advising, Transfer Student Success, MUSE, LEAP, the Office for First Generation Access, and the Bennion Center. OUR is incredibly grateful to the ongoing support from the Vice President of Research both VPR Andy Weyrich and Interim VPR Erin Rothwell, who have both prioritized undergraduate research as a central aspect of university's research commitments. We have been so fortunate to have support from the highest level of the institution for 2021-2022, President Taylor Randall, the previous SVPAA Dan Reed, and Interim SVPAA Martell Teasley have been champions of undergraduate research. Other important partners the OUR have included Government & Relations, Equity, Diversity & Inclusion, the 18 Colleges and their communities, Student Affairs, and campus-wide partners. The Office of Undergraduate Research fosters cutting edge research because of faculty, staff and student collaborators across the University of Utah. We also recognize that research is supported by communities, chosen families, and the multiple mentors (from peer, to faculty, to staff) that surround a researcher. As an office of Undergraduate Studies we see our commitment to all students interested in research. Thank you to our donors, sponsors, partners, and collaborators for making this vision possible. There are so many people named and unnamed who are central to the success of undergraduate researchers. But most importantly, it is undergraduate students that we must applaud—it is a collaboration. We are honored to be a part of their academic journeys contributing to the robust academic and research life at the U.

# APPENDIX A: List of UROP Scholars (Summer 2021 -Summer 2022)

## Architecture & Planning (5)

Naren Anandh (Fall 2021) Lexie Bingman (Fall 2021) Natalie Caylor (Spring 2022) Samantha Eddy (Summer 2021, Summer 2022) Isabel Fuller (Spring 2022)

# Business (1)

Huong Mai (Spring 2022)

# Cultural & Social Transformation (11)

Cloe Butler (Fall 2021) Liuchen Chen (Fall 2021) Sandra Del Rio Madrigal (Fall 2021, Spring 2022) Thaiss Del Rio Sanchez (Fall 2021) Lauren Harvey (Spring 2022) Holden Jones (Spring 2022) Frances Lucas (Spring 2022) Sanila Math (Spring 2022) Mariah Montoya (Spring 2022) Miles Smith (Spring 2022) Moala Solomone - Hala'eua (Spring 2022)

# Dentistry (3)

Sophia Boehler (Fall 2021 and Spring 2022) Jordan Cutshall (Fall 2021 and Spring 2022) Summer Furrer (Fall 2021 and Spring 2022)

# Education (3)

Mickenzie Fleming(Fall 2021 and Spring 2022) Benjamin Searle (Summer 2022) Mary Smith (Spring 2022)

# Engineering (110)

Issak Allaire-MacDonald (Summer 2021) Nicolai Andreas (Fall 2021 and Summer 2021) Marissa Angell (Summer 2021) Drew Becker (Fall 2021 and Spring 2022) Anna Bell (Summer 2021) Kian Ben-Jacob (Fall 2021 and Spring 2022) Sophia Blankevoort (Spring 2022) Anna Busatto (Fall 2021 and Summer 2021) Henry Cagle (Fall 2021) Miranda Cardenas Spring 2022) Bryce Cheek (Fall 2021) Carter Christensen (Fall 2021 and Spring 2022) Ping Cheng Chung (Summer 2021) Abigail Citterman (Fall 2021) Clara Coffey (Spring 2022) Nicholas Colt (Fall 2021) Aaron Coon (Summer 2022) Aidan Copinga (Fall 2021 and Summer 2021) James Craig (Summer 2022) Lorenz Cushman (Fall 2021 and Spring 2022) Bailey Doucette (Fall 2021 and Summer 2021)

#### **Engineering cont**

Collin Dover (Summer 2022) Kaylon Draney (Spring 2022) Spencer Eiting (Fall 2021) Dillon Fehlau (Fall 2021 and Summer 2021) Tanner Frahm (Summer 2022) Alexis Friedman (Summer 2022) Ethan Gallup (Summer 2021) William Graham (Fall 2021) Ezekiel Green (Spring 2022) Nicholas Greger (Spring 2022) Cleo Hancock (Fall 2021) Colin Hancock (Summer 2021) Kaysen Hansen (Summer 2022) Alyssa Harpring (Fall 2021 and Spring 2022) Abigail Harrison (Fall 2021 and Spring 2022) Liam Haynie (Summer 2022) Colin Hinchman (Fall 2021) Jacob Hirst (Spring 2022) Lindi Hopkins (Spring 2022) Jude Horsley (Spring 2022) Mason Jacketta (Spring 2022) Nathan Jensen (Summer 2021) Hannah Khelfa (Summer 2021) Wona Kim (Summer 2022) Jonas Knochelmann (Summer 2022) Olivia Lam (Fall 2021) Charles Lambert (Fall 2021) Alan Larrea Caro (Spring 2022) Alexandra Leavitt (Summer 2022) Kaylen Lee (Spring 2022) Shiyang Li (Fall 2021) Sabrina Lin (Summer 2022) Robert Lindemann (Spring 2022)

#### **Engineering cont**

Emily Lym (Summer 2022) Angelica Madsen (Fall 2021 and Spring 2022) Vista Marston (Summer 2021 and Fall 2021) Garrett McClellan (Spring 2022) James McMahon (Fall 2021) Colin McNabb (Summer 2021) Cameron Mercer (Summer 2021 and Spring 2022) Braden Miles (Fall 2021) Alberto Miranda (Summer 2021 and Spring 2022) Sara Morrison (Fall 2021) Caden Myers (Fall 2021) Alexandra Neubauer (Summer 2021) Quinna Nguyen (Summer 2022) Braedon Olsen (Fall 2021 and Spring 2022) Andrew Osterhout (Fall 2021) Crysta Oswald (Summer 2021) Tavie Parker (Fall 2021 and Spring 2022) Samuel Partridge (Summer 2021) Adriana Payan-Medina (Spring 2022) Jeffrey Perry (Fall 2021) Emma Pinegar (Fall 2021) Kennedy Powell (Summer 2021) Nathan Ramey (Summer 2022) David Rou (Summer 2022) Gabriel Santana (Fall 2021) Tanner Short (Fall 2021) Gabriel Shuster (Fall 2021) Ali-Abbas Sial (Spring 2022) Andie Sieja (Fall 2021) Rian Simpson (Summer 2021) Dawson Slaughter (Spring 2022) Erick Solum (Fall 2021) Micah Spjute (Summer 2022) Megan Sterrett (Summer 2021)

#### **Engineering continued**

Alexander Stevens (Fall 2021) Sabrina Su (Fall 2021 and Spring 2022) Gnimdo Tako (Summer 2021) Payton Thomas (Fall 2021) Claire Ticknor (Summer 2021) Sarthak Tiwari (Fall 2021) Anya Tiwari (Spring 2022) Michael Turja (Fall 2021) Rebecca Urban (Summer 2021 and Spring 2022) Bailey Van Wagoner (Spring 2022) Vincent Veibell (Spring 2022) Olivia Walker (Fall 2021 and Spring 2022) Shiyu Wang (Spring 2022) Tyler Whitley (Spring 2022 and Summer 2022) Elizabeth Winterholler (Spring 2022) Breanna Wong (Spring 2022 and Summer 2022) Elaine Wong (Summer 2021 and Fall 2021) Derrick Wong (Summer 2021 and Fall 2021) Jialin Wu (Fall 2021) Anna Yarema (Summer 2022) Sammi Yu (Spring 2022 and Summer 2022) Jared Zollinger (Fall 2021 and Spring 2022)

# Fine Arts (7)

Yein Ji (Spring 2022 & Summer 2021) Mara Magistad (Fall 2021) Eleanor Otis (Summer 2021) Makena Reynolds (Fall 2021) Duke Ross (Spring 2022) Brynn Staker (Spring 2022 & Fall 2021) Leisina Wolfgramm (Summer 2022)

# Health (28)

Hunter Carlson (Spring 2022) Calvin Coates (Summer 2022) Rachel Compton (Fall 2021 and Spring 2022) Tala Hammond (Summer 2022) Tyler Ho (Spring 2022) Linnea Horvath (Spring 2022) Brianna Ingersoll (Spring 2022 and Summer 2022) Serena Jones (Summer 2021 and Fall 2021) Sophia Loose (Spring 2022) Teasha Luu (Fall 2021) Kelly Mai (Fall 2021) Michael Maio (Fall 2021) Zachary Mallender (Spring 2022 and Summer 2022) Thayer McCollum (Fall 2021 and Spring 2022) Emmanuel Onyeagba (Summer 2022) Evan Oro (Spring 2022) Crystal Ortiz (Fall 2021 and Spring 2022) Ryan Park (Spring 2022) Andrew Payne (Fall 2021 and Spring 2022) Tessa Petersell (Fall 2021 and Spring 2022) Kayla Rebentisch (Spring 2022 and Summer 2022) Justinas Sapiega (Fall 2021) Momina Sial (Summer 2021) Jaclynn Smith (Fall 2021 and Spring 2022) Ethan Stanley (Fall 2021) Heba Sultan (Fall 2021 and Spring 2022) Clara William (Summer 2022) Elena Yee (Fall 2021)

# Humanities (11)

Debora Brito de Andrade (Summer 2021) James Conger (Spring 2022) Kailee Ferret (Spring 2022) McKinley Gough (Fall 2021 and Spring 2022) Rachel Holland (Spring 2022 and Summer 2022) Megan Lynch (Spring 2022) Cody Page (Spring 2022) Jessica Repman Johnson (Spring 2022) William Shadley (Spring 2022) Michaella Valenzuela (Fall 2021) Anika Weaver (Fall 2021)

# Medicine (76)

Diar Ahmed (Summer 2022) Derek Anderson (Fall 2021 and Spring 2022) Emily Ballard (Spring 2022) Daniel Barrera (Spring 2022) Andelin Beishline (Summer 2021 and Spring 2022) Alex Billings (Fall 2021 and Spring 2022) Nickolas Blank (Fall 2021) Bergen Braun (Spring 2022) Dallen Calder (Spring 2022) Alexandra Call (Summer 2021) Britney Chen (Spring 2022) Jui-Yi Chiou (Summer 2022) Taylor Christensen (Spring 2022) Ashley Covington (Fall 2021 and Spring 2022) Angi Deng (Fall 2021 and Spring 2022) Zachary Eatough (Fall 2021 and Spring 2022) Jenny Echeverria (Fall 2021 and Spring 2022) Nicolas Edgar (Summer 2021)

#### **Medicine continued**

Katerina Excell (Fall 2021 and Spring 2022) Fatima Faizi (Spring 2022) Jordyn Gagon (Spring 2022) Shalyce Gardner (Summer 2022) Erin Garzella (Summer 2021) Rose Godfrey (Fall 2021) Aleah Griffin (Fall 2021) Ella Habbeshaw (Fall 2021) Gabrielle Hadinger (Fall 2021 and Summer 2022) Karah Hall (Fall 2021 and Spring 2022) Olivia Hanson (Fall 2021 and Spring 2022) Josh Hillyard (Fall 2021 and Summer 2022) Jonathan Hong (Summer 2022) Nathanael Hooper (Spring 2022) Alicia Horn (Spring 2022) McKenna Hunt (Fall 2021 and Spring 2022) Alexander Ingold (Summer 2021) Nathan Iverson (Summer 2022) Howard Jacobson (Summer 2021) Simran Karim (Spring 2022) Shalini Kasera (Fall 2021) Arianna LaLonde (Fall 2021) Jack Landmesser (Summer 2022) Joshua Larsen (Fall 2021) Clara Lindley (Summer 2021 and Fall 2021) Grace Liu (Spring 2022) Seth Lunt (Fall 2021) Zihao Lyu (Summer 2022) Mitchell Mansell (Spring 2022) Joshua Marchant (Fall 2021) Cole Matteson (Fall 2021) Matthew Michaud (Spring 2022 and Summer 2022)

#### Medicine continued

Raina Miller (Spring 2022 and Summer 2022) Azeem Mohammed (Fall 2021 and Spring 2022) Erika Muhlrad (Fall 2021) Henry Nibley (Fall 2021) Carter Niedert (Fall 2021) Emily Nuibe (Fall 2021 and Spring 2022) Sonresa Ochoa-Vidales (Fall 2021) Amani Oumar (Summer 2021 and Fall 2021) Yun Soo Park (Summer 2022) Ethan Parker (Fall 2021) Dainen Parry (Summer 2021 and Fall 2021) Alan Prasad (Fall 2021) Sarv Raafati (Summer 2021 and Fall 2021) Ashlee Roberts (Spring 2022) Stella Santa Ana (Fall 2021) Dana Schiwal (Summer 2021 and Fall 2021) Jada Kali Stelmach (Fall 2021) Lindsey Stewart (Fall 2021 and Spring 2022) Kishan Thambu (Fall 2021) Ashley Thompson (Spring 2022) Hannah Torabi (Fall 2021) Emilio Trujillo (Summer 2022) Markel Walter (Summer 2021 and Fall 2021) Anya Weglarz (Spring 2022 and Summer 2022) Jennie Wilson (Spring 2022) Katherine Wright (Fall 2021 and Spring 2022) YaFeng Xiong (Spring 2022)

### Mines & Earth Sciences (18)

Aiden Beukema (Spring 2022) Stephanie Brock (Summer 2021) Garrett Butler (Summer 2022) Savhannah Carpenter (Summer 2021) Dewi Eagan (Summer 2022) Madeleine Festin (Fall 2021) Brittney Hoskins (Fall 2021) Rachel Jorgensen (Fall 2021) Pauline Kneller (Fall 2021 and Spring 2022) Margaret Lelonek (Spring 2022) Annie Matzke (Summer 2021) Alec Phipps-Wirtz (Summer 2022) Mallory Scofield (Spring 2022) Sarah Smart (Summer 2021) Nancy Sohlberg (Summer 2022) Karrah Spendlove (Fall 2021

and Spring 2022) Nickolas Squire (Spring 2022) Ian Wixom (Fall 2021)

# Nursing (4)

Sydney Gilliland (Summer 2021) Justin Ingraham (Fall 2021) Kimberly Ponce Gonzalez (Spring 2022) Kari Stoddard (Summer 2021 and Fall 2021)

# Pharmacy (11)

Spencer Carstens (Summer 2022) Gabrielle Desjardins (Spring 2022) Adam Ford (Spring 2022)

#### Pharmacy continued

Marina Gerton (Fall 2021 and Spring 2022) Job Huxford (Spring 2022) Michelle Le (Fall 2021 and Spring 2022) Sonia Osuna (Summer 2022) Katelyn Pyper (Fall 2021 and Spring 2022) Miles Thomas (Summer 2022) Elise-Marie Vandamme (Summer 2021) Yunyue Zhang (Spring 2022)

# Science (60)

Pooja Annigeri (Fall 2021) Maxwell Austin (Fall 2021 and Spring 2022) Dua Azhar (Fall 2021 and Spring 2022) Arnel Besic (Spring 2022) Bryce Bosworth (Summer 2022) Alison Bouck (Summer 2022) Michelle Cao (Summer 2022) Lillee Casselman (Fall 2021) America Cox (Summer 2022) Victoria Ding (Spring 2022) Hannah Doherty (Fall 2021) Drue Domagala (Spring 2022) Cannon Fehrenbach (Spring 2022) David Furness (Summer 2022) Kimberly Gamarra (Fall 2021) ANI GIOKAS (Fall 2021) Kenneth Goler (Summer 2021) Preston Harris (Spring 2022) Hailey Hauck (Summer 2021 and Spring 2022) Joshua Hill (Spring 2022 and Summer 2022) Alessandrina Hoffman (Spring 2022) Lauren Hulse (Summer 2021 and Fall 2021)

#### Science continued

Miles Jacob (Summer 2021 and Fall 2021) Harrison Jendrusch (Fall 2021) Caroline Keller (Spring 2022) Sameer Khan (Spring 2022) Daniel Koizumi (Spring 2022) Andrew Larkin (Spring 2022 and Summer 2022) Brooke Larson (Fall 2021 and Spring 2022) Hannah Lee (Summer 2022) Kevin Lutz (Summer 2021) Steven Marz (Summer 2021 and Fall 2021) Victoria Medvedeva (Spring 2022) Carl Mellor (Fall 2021 and Spring 2022) Ashley Merrell (Summer 2021) Ethan Murdock (Summer 2021 and Fall 2021) Benjamin Natividad (Summer 2021 and Spring 2022) Christopher Nelson (Spring 2022) SamanthaNestel (Spring 2022) Kiyo Obayashi (Fall 2021 and Spring 2022) Ava Peitz (Summer 2021 and Spring 2022) Gary Perea (Fall 2021 and Summer 2022) Mikal Peterson (Summer 2022) Julia Petheram St. Andre (Summer 2022) Olivia Pratt (Spring 2022) Charlotte Randolph (Summer 2021) Charlotte Randolph (Fall 2021) Jackson Ridges (Fall 2021 and Spring 2022) Ana Rowe (Summer 2022) Summer Soller (Spring 2022) Sarita Som (Spring 2022) Mitchell Spendlove (Summer 2022)

#### Science continued

Ella Spurlock (Spring 2022) Sophie Steckel (Spring 2022) Bassel Tekarli (Spring 2022) Maya Wagner (Summer 2021 and Fall 2021) Marc Whiting (Spring 2022 an dSummer 2022) Claudia Wiese (Spring 2022) Ding Wu (Fall 2021 and Spring 2022) Nikolai Zarandona (Summer 2022)

### Social & Behavioral Science (64)

Emily Adler (Spring 2022) Tali Bauman (Summer 2021) Karen Bennett (Spring 2022) Allesandra Bergmark (Spring 2022) Anya Biskupiak (Spring 2022) Chloe Bokinskie (Spring 2022 and Fall 2021) AlexanderBrill (Fall 2021) Joshua Christensen (Fall 2021) Jessica Cuello (Spring 2022) Maren Curtis (Fall 2021 and Spring 2022) KC Ellen Cushman (Fall 2021) Emily Davidge (Fall 2021) Anna Carissa Delos Reyes (Fall 2021) Shane Denherder (Spring 2022 and Summer 2022) Emmanuel Diaz (Spring 2022) Shaistah Din (Fall 2021) Morrison Donovan (Summer 2021) Morrison Donovan (Fall 2021) Aidyn Eldredge (Fall 2021 and Spring 2022) Bryce Fairbanks (Spring 2022) James Faulkner (Summer 2021)

#### Social & Behavioral Science continued

Isabelle Fernandez (Summer 2021 and Spring 2022) Madison Gahan (Fall 2021 and Spring 2022) Lauren Gleave (Fall 2021 and Spring 2022) Emma Glende (Summer 2022) Aaron Gold (Fall 2021) Jacqueline Gomez (Fall 2021 and Spring 2022) Blessing Heelis (Fall 2021) Dylan Hutchings (Summer 2021 and Fall 2021) Devon Jecmen (Fall 2021) Seokjin Jeong (Spring 2022) Saey Kamtekar (Spring 2022) Leehye Kang (Fall 2021) Kayleigh Kirkpatrick (Fall 2021 and Spring 2022) Augusto Lopez (Fall 2021 and Spring 2022) Marin Macfarlane (Summer 2022) Rose McLaughlin (Fall 2021) Audrey Meyer (Fall 2021) Melika Moeinvaziri (Fall 2021) Maren Moffatt (Summer 2021 and Fall 2021) Nadege Nayituriki (Fall 2021) Natasha Pagel-Aprill (Fall 2021 and Spring 2022) Samantha Paredes (Fall 2021 and Spring 2022) Torri Peck (Summer 2021 and Fall 2021) Angela Pham (Spring 2022) Shaylie Platten (Fall 2021 and Spring 2022) Alicia Quick (Summer 2022) Alyssa Richards (Spring 2022) Mary Roalstad (Spring 2022) Annie Sanchez (Fall 2021 and Spring 2022) Allyson Schmidt (Summer 2021)

#### Social & Behavioral Science continued

Jessica Schmidt (Fall 2021 and Spring 2022) Carrie Schultz (Fall 2021 and Spring 2022) William Schulz (Spring 2022) Brooklynn Scott (Fall 2021) Emily Singer (Fall 2021 and Spring 2022) Matthew Snyder (Summer 2021 and Fall 2021) Macey Tilk (Spring 2022) Caton Weinberger (Fall 2021) Emilee Wilson (Summer 2021 and Spring 2022) Anahi Yerman (Fall 2021 and Spring 2022) Robin Young (Fall 2021) Sierra Young (Summer 2022) Angie Zheng (Spring 2022)

# Social Work (1)

Morrison Donovan (Summer 2021, Fall 2021)

# APPENDIX B: List of Faculty Mentors–UROP (Summer 2021 - Summer 2022)

# Architecture & Planning (4)

#### Summer 2021 Shundana Yusaf Fall 2021

Sarah Hinners Shundana Yusaf

#### Spring 2022

Valerie Greer Sarah Hinners

#### Summer 2022

Shundana Yusaf

# Business (1)

Spring 2022 Barbara Blair

### Cultural & Social Transformation (6)

#### Fall 2021

Ana Antunes Annie Isabel Fukushima

#### Spring 2022

Annie Isabel Fukushima Edmund Fong Claudia Geist Kim Hackford-Peer Thomas Swensen

#### Summer 2022

Claudia Geist

# Dentistry (1)

Fall 2021 Melodie Weller Spring 2022 Melodie Weller

#### Education (3) Fall 2021 Agron Fischer

#### Spring 2022 Aaron Fischer Cynthia Benally Summer 2022 Lauren Barth-Cohen

### Engineering (53) Summer 2021

Anthony Butterfield **Brittany Coats** Alan Dorval **Cynthia Furse Bruce Gale** Tao Gao Jake George Ganesh Gopalakrishnan **Thomas Henderson** Marina Kogan Yong Lin Kong Alan Kuntz Rob MacLeod Sanford Meek **Rajesh Menon** Mark Minor Swomitra Mohanty Kody Powell Shad Roundy Wenda Tan Pai Wana Michael Young

#### Fall 2021

Jake Abbott Rajeev Balasubramonian Jeffrey Bates Tamara Bidone Marc Calaf Rogelio Cardona-Rivera Brian Cottle Cindy Furse

#### Engineering cont. Fall 2021

Tao Gao Jacob George Ganesh Gopalakrishnan David Grainger **Thomas Henderson Tucker Hermans** Jacob Hochhalter Jay Kim Yong Lin Kong Alan Kuntz **Eugene Kwan Rob MacLeod** Mark Minor Swomitra Mohanty **Chris Pantelides** Shad Roundy **Taylor Sparks** Caleb Thomson Lucas Timmins **Roseanne Warren** David Warren Jennifer Weidhaas Heayoung Yoon **Thomas Zangle** Mu Zhang

#### Spring 2022

**Jeffrey Bates Robert Bowles** Tara Deans Julia Dunn Cynthia Furse **Bruce Gale** Tao Gao Jacob George Ramesh Goel **David Grainger Robert Hitchcock** Jacob Hochhalter Jungkyu Kim Marina Kogan Yong Lin Kong Jessica Kramer

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#### *Engineering cont* Spring 2022 cont

Rob MacLeod Andrew Merryweather Swomitra Mohanty Pania Newell Frank Sachse Taylor Sparks Jennifer Weidhaas Heayoung Yoon Thomas Zangle Haohan Zhang

#### Summer 2022

Rogelio Cardona-Rivera Alan Dorval Daniel Drew Tao Gao Jacob George Yong Lin Kong Jan Kubanek Alan Kuntz Swomitra Mohanty Shahrzad Roshankhah Frank Sachse Jennifer Weidhaas Heayoung Yoon

# Fine Arts (8)

#### Summer 2021

Alexandra Harbold Emelie Mahdavian

#### Fall 2021

Daniel Clifton Elizabeth Craft Alexandra Harbold

#### Spring 2022

Elizabeth Craft Brian Snapp Sonia Albert-Sobrino Miriam Albert-Sobrino

Summer 2022 Meekyung MacMurdie

### Health (17) Summer 2021

Micah Drummond Jessica King

#### Fall 2021

Yang Bai Jesse Christensen Christopher Depner Micah Drummond Peter Fino Samantha Gustafson Tanya Halliday Will Holland Anandh Babu Pon Velayutham J David Symons Joel Trinity

#### Spring 2022

Yang Bai Jesse Christensen Christopher Depner Peter Fino Tanya Halliday William Holland Skyler Jennings Jessica King Anandh Babu Pon Velayutham J david Symons

#### **Summer 2022**

Genevieve Albouy Sihem Boudina Jesse Christensen Christopher Depner Will Holland Jessica King

#### Humanities (10) Summer 2021

Tanya Flores

#### Fall 2021

Lindsey Drager Maureen Mathison Carlos Santana

#### Spring 2022

Leslie Francis Kendall Gerdes Jay Jordan ShawnaKim Lowey-Ball Maureen Mathison Jerry Root Carlos Santana

#### **Summer 2022**

Maureen Mathison Margaret Wan

#### Medicine (58) Summer 2021

Alessandra Angelucci Josh Bonkowsky Wade Fallin Vincent Koppelmans Jennie Ose Alex Shcheglovitov Rodney Stewart

#### Fall 2021

Anna Beaudin Josh Bonkowsky Owen Chan Hilary Coon Melissa Cortez Donna Cross Michael Deans Bruce Edgar Nels Elde Julio Facelli

#### *Medicine Continued* Fall 2021 Continued

Thomas Fallin Lyen Huang Sudha Jayaraman Randy Jensen Sujee Jeyapalina Lisa Joss-Moore David Krizai Kristen Kwan Amy Lenz Andres Maricq **Brian Mickey** Henrik Odeen Jennifer Ose Allison Payne Marcus Pezzolesi Candace Reno Viola Rieke Jared Rutter Alex Shcheglovitov Yan-Ting Shiu Sarina Sinclair Matthew Thiese Melissa Watt **Dustin Williams** Moriel Zelikowsky Jie Zhang

#### Spring 2022

Andrew Anderson Anna Beaudin **Clement Chow** Melissa Cortez Stavros Drakos Bruce Edgar Ram Gouripeddi Heath Henninger Man Hung Sudha Jayaraman **Randy Jensen** Sujee Jeyapalina Lindsay Keegan David Krizaj Tracey Lamb Amy Lenz Catherine Loc-Carrillo Andres Maricq

#### *Medicine Continued* Spring 2022 Continued

Gennie Parkman Marcus Pezzolesi Candace Reno Aylin Rodan Lubdha Shah Yan-Ting Shiu Matthew Thiese Melissa Watt Dustin Williams Yelena Wu Moriel Zelikowsky

#### **Summer 2022**

Anna Beaudin Dipayan Chaudhuri Clement Chow Nicholas Frost Heath Henninger Kent Lai Scott Langenecker Benjamin Myers Allison Payne Yan-Ting Shiu Melissa Watt Jun Yang Moriel Zelikowsky

### Mines & Earth Sciences (11) Summer 2021

Brenda Bowen Peter Lippert Mark Loewen **Fall 2021** Gannet Hallar Randall Irmis Mark Loewen Jeffrey Moore Thomas Reichler Kathleen Ritterbush Leif Anderson Sivaraman Guruswamy Gannet Hallar

#### CMES Continued Spring 2022

Randall Irmis Cari Johnson

#### **Summer 2022**

Leif Anderson Gannet Hallar Kathlee Ritterbush

#### Nursing (3) Summer 2021

Lauri Linder Lisa Taylor-Swanson

#### Fall 2021

Lauri Linder Lisa Taylor-Swanson

#### Spring 2022

Katherine Supiano

#### Pharmacy (8) Summer 2021

Marco Bortolato Fall 2021 Shawn Owen Eric Schmidt Karen Wilcox

#### Spring 2022

Marco Bortolato Jindřich Kopeček Shawn Owen Eric Schmidt Karen Wilcox

#### **Summer 2022**

Shreya Goel Peter West Karen Wilcox

### Science (36)

#### **Summer 2021**

Sophie Caron Jamie Gagnon Ming Hammond Nitin Phadnis Aaron Puri Jon Rainier Andrey Rogachev Ryan Steele Michael Werner Dan Wik Gail Zasowski

#### Fall 2021

Sophie Caron Fabienne Chevance Julie Hollien Kelly Hughes Nitin Phadnis Wayne Potts Aaron Puri Jon Rainier Andrew Roberts Andrey Rogachev Caroline Saouma Anurag Singh Daniel Wik

#### **Summer 2022**

Ben Bromley Shanti Deemyad Bryn Dentinger Jordan Gerton Wesley Hamilton John Longino Ryan Looper John Parkinson Nitin Phadnis Caroline Saouma Michael Werner

#### Spring 2022

Connor Bischak William Brazelton Benjamin Bromley Bethany Buck-Koehntop Sophie Caron Fabienne Chevance

#### *Science Continued* Spring 2022

James Gagnon Ming Hammond Julie Hollien Sean Howe Talia Karasov J. Michael McIntosh Nitin Phadnis Aaron Puri Jon Rainier Andrew Roberts Caroline Saouma Joshua Steffen Michael Werner Luisa Whittaker-Brooks

#### **Summer 2022**

Ben Bromley Shanti Deemyad Bryn Dentinger Jordan Gerton Wesley Hamilton Thomas King John Longino Ryan Looper John Parkinson Nitin Phadnis Caroline Saouma Michael Werner

# Social & Behavioral Science (32)

#### Summer 2021

Katie Baucom Cynthia Berg Trafton Drew Tyler Faith Leslie Knapp Shane Macfarlan Kristina Rand Jeanine Stefanucci

#### Fall 2021

Cynthia Berg Shannon Boomgarden Andrea Brunelle Brian Codding James Curry Lisa Diamond Marissa Diener **Trafton Drew Tyler Faith** Akiko Kamimura Lori Kowaleski-Jones Sara LoTemplio Shane Macfarlan Thomas Maloney Kenneth Raby **Brent Steele Timothy Tim** Jennifer Watt Guangzhen Wu Spring 2022 Katherine Baucom Brian Baucom Andrea Brunelle Adrienne Cachelin Larry Coats Elisabeth Conradt

Elisabeth Conradt Jennifer Follstad Shah Akiko Kamimura Lori Kowaleski-Jones Sara LoTemplio Shane Macfarlan Thomas Maloney Ella Myers

#### Social & Behavioral Science Continued Spring 2022 Cont

Brennan Payne Mitchell Power Jeanine Stefanucci Jennifer Watt Timothy Webster Guangzhen Wu

#### Summer 2022

Adrienne Cachelin Elisabeth Conradt Kim Korinek

#### Social Work (1) Summer 2021

Sarah Canham Fall 2021 Sarah Canham

# APPENDIX C: UROP Graduate Student Mentors of OUR Scholars (Summer 2021 - Summer 2022)

#### Engineering (6) Fall 2021

Eugene Kwan Caleb Thomson Brian Cottle

#### Spring 2022

#### Julia Dunn

#### **Summer 2022**

Eugene Kwan Nicholas Witham Andrew Miller

#### Science (2) Fall 2021 Maggie Doolin Summer 2022 Thomas King

# Social & Behavioral Science (6)

Summer 2021 Becky Neufeld

#### Fall 2021

Stella Mosher Becky Neufeld Stefania Wilks

#### Spring 2022

Amy McDonnell Stella Mosher Kaedan O'Brien Jack Silcox Stefania Wilks

#### **Summer 2022**

Amy McDonnell

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# **APPENDIX D: Summer Program for Undergraduate Research (SPUR) Scholars**

### **Architecture &** Planning

2021 (1) Manuela Herrera Naranjo 2022(1) Olivia Vielstich

# **Cultural & Social** Transformation

2022 (1) Natalia Garrido

### Dentistry

2021 (1) Summer Furrer 2022 Brenda Acosta

### Education

2021 (2) Angela Pham April Radford 2022 (2) Luke Kim Mary Smith

# Engineering

2021(6) Jose Carreon-Andrade **Dillon Crytser Bianca** Paulino Chanel Van Ginkel Ye Zhou Jared Zollinger 2022 (6) Andrew Bergenthal **Brielle Bingener** Rachel D'Agostini Caden Hamrick Jake Hirst Tom Kauffman

### Health

2021 (4) Revi Brown

#### Heath 2021 Continued

Isaac Cao **Rachel Compton** Ryan Park 2022 (3) Sarah Haysley Jade Robinson Keaton Rosquist

#### **Humanities** 2021 (1)

Lex Putnam 2022(1) Eliana Massey

### Medicine

2021 (21) Awais Ahmad Ashley Bates **Dallen Calder** Zach Eatough Deja Gaston **Kiley Hewitt** Jorge Jimenez Kyle Kazemini Chloe Kraft Shannon Lamb **Derek Lawrence** Grace Liu Jens Nilson Salma Perez Rios Kevin Ramos Aashna Shah

Andrew Spencer Sarthak Tiwari Gary Urry Angel Valenzuela Isaac Warner 2022 (12) Camden Alexander Sarah Bayardo ustin Bender Sam Evans Jackie Gomez Naomi Guerrero Reyes Ellie Han Jordy Larrea Rodriguez

#### Medicine 2022 Continued

Marlon Lopez Monica Owens Catherine Petersen Kevin Ramos

### **Mines & Earth**

Sciences 2022 (2) Gabriel Baffour Jessica Cuello

#### Nursina 2021 (1)

Jordan Muehlberger

#### Pharmacv 2022 (1)

Ananya Kumar

### Science

2021 (1) April Radford 2022 (4) Marco Castaneda Norzom **Teiashree Prakash Eleanor Wachtel** 

# **Social & Behavioral**

#### Science 2021 (7)

Lensky Augustin Aparna Mangadu **Bennie Martinez** Vianey Quaney Luis Torres Avery Wall Caton Weinberger 2022 (2) Hope Caviness Tara Olson

#### Social Work 2022 (1)

Audrey Pozernick

# APPENDIX E: Faculty Mentors - SPUR (Summer 2021 & Summer 2022)

# Architecture & Planning (2)

2021 (1) Daniel Mendoza 2022 (1) Ivis Garcia Zambrana

### Cultural & Social Transformation (1)

**2022 (1)** Claudia Geist

### Dentistry

Melodie Weller (2021 & 2022)

### Education

2021 (2) Erin Castro Monika Lohani 2022 (1) José Gutiérrez

# Engineering 2021 (4)

Kerry Kelly Frank Sachse Benjamin Sanchez Terrones Roseanne Warren **2022 (6)** Jacob George Jan Kubanek Sameer Patil Xuming Wang Jason Wiese Haohan Zhang

# Health

2021 (4) Anandh Babu Rajeshwary Ghosh Skyler Jennings J David Symons 2022 (3) Skyler Jennings Bradley King Anandh Babu Pon Velayutham

Humanities Matthew Basso (2021 & 2022)

### Medicine

2021 (18) Samir Abdelrahman Amanda Bakian Maria Bettini KC Brennan Owen Chan Melissa Cortez Ed DiBella Stavros Drakos Karen Eilbeck Ramkiran Gouripeddi Man Hung Kensaku Kawamoto Amv Lenz Russell Richardson Jill Shea Martin Tristani-Firouzi Matt Wachowiak Robert Welsh 2022 (9) Owen Chan Scott Collingwood **Gregory Ducker** Ramkiran Gouripeddi Joseph Kim Anne Kirchhoff Amy Lenz Erin McGlade James VanDerslice

# **Mines & Earth**

Sciences Daniel Mendoza (2022)

# Nursing

Djin Tay (2021)

#### Pharmacy Shreya Goel (2022)

# Science

2021 (1) William Anderegg 2022 (4) William Anderegg Regina Frey James Gagnon Joshua Steffen

#### Social & Behavioral Science

**SCIENCE** 2021 (3)

Lee Raby Jack Silcox David Strayer **2022 (2)** Lisa Diamond Brennan Payne

# Social Work

**2022 (1)** Tiffany Baffour



Data captured in this report reflects programs and activities between 2015 and 2022, with particular emphasis on 2021 to 2022 academic year.

Questions? Contact Annie Isabel Fukushima at our@utah.edu or visit our.utah.edu.



Address SILL CENTER 005 SALT LAKE CITY, UT 84112

**Telephone** (801) 581-8070

Website our.utah.edu