

Office of Undergraduate Research
Program Review

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Notation

AY: Academic Year ARTS/HUM: Lindquist College of Arts and Humanities BUS/ECON: The Goddard School of Business and Economics CRE: Curricular and Co-Curricular Research Experiences ENG/TECH: The College of Engineering, Applied Science and Technology EDUC: Moyes College of Education HEALTH: Dumke College of Health Professions	NCUR: National Conference on Undergraduate Research R&E: Research and Engagement SCIENCE: The College of Science SOC/BEH: College of Social and Behavioral Sciences SUROP: Summer Research Opportunity Program OUR: The Office of Undergraduate Research UCUR: Utah Conference on Undergraduate Research UR: Undergraduate Research
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Office of Undergraduate Research (OUR)

Program Review Goals

- ❖ Evaluate programs and services offered by OUR to students and faculty for quality, effectiveness and breadth. Recommend areas of strength and areas needing improvement.
 - Assessment Processes and Questions
 - Assessment Data

- ❖ Re-evaluate the mission and purpose of OUR to increase effectiveness and efficiency.
 - Ensure OUR has the necessary resources for fulfilling its mission, such as:
 - Funding, working with the Development Office
 - Position at WSU
 - Space
 - Staffing
 - Communication platforms and materials (website, social media, brochures, etc.)
 - System for tracking and reporting undergraduate research assessment data
 - Working with human subject review teams and the Office of Sponsored Projects

- ❖ Ensure alignment with Academic Affairs divisions and university mission, as well as meeting the objectives of providing opportunities for high impact educational experiences.
 - Providing support/assistance for undergraduate research activities that are external to OUR (faculty labs, etc.), and tracking for the University.

- ❖ Create action plans and identify initiatives needed to take WSU's OUR to the next level to be seen as a regional leader in undergraduate research.

Contents

1	About OUR.....	7
1.1	Office Developments.....	7
1.2	History of Program Developments.....	7
1.3	Vision, Mission, and Values.....	9
1.4	OUR and the University’s Core Themes of Access, Learning, and Community.....	11
1.5	Undergraduate Research as a High Impact Educational Experience.....	11
1.6	Office of Undergraduate Learning and Program Outcomes.....	11
2	Core Programs, Launch Dates, and Descriptions.....	13
2.1	Research Grants.....	13
2.2	Travel Grants and Dissemination.....	19
2.2.1	Conferences on Undergraduate Research.....	22
2.3	Internal Dissemination.....	25
2.3.1	Undergraduate Research and Engagement Symposium.....	25
2.3.2	ERGO, undergraduate research journal published by Weber State University.....	28
2.4	Curriculum and Co-Curricular Research Experiences (CRE).....	29
2.5	Research Fellowship Program.....	37
2.6	Summer Research Opportunity Program (SUROP).....	43
2.7	Summary of Involvement in OUR programs and in meeting WSU Core Themes.....	48
3	Campus Outreach and Collaborations.....	50
4	Leadership and Staffing.....	51
4.1	Job Descriptions.....	53
4.2	Training and Professional Development.....	62
4.3	Additional Staffing.....	62
5	Financial Resources Budget and Development Efforts.....	63
5.1	Accounts, Description, Type and Source and Type.....	63
5.2	Development Efforts.....	64
6	Facilities, Equipment, and Technology.....	65
7	Ethical and Legal Responsibilities.....	65
8	Travel.....	65
9	Training (all types).....	66
10	Human Subject/Animal Care and Use.....	66
11	Assessment and Evaluation.....	67
11.1	Assessment Take-Aways.....	76

12	Undergraduate Research: Students.....	78
13	Undergraduate Research: Mentors	80
14	Results of Previous Program Review	82
15	Summary.....	85
16	Appendices	86
	Appendix A: Undergraduate Research Grant Application	87
	Appendix B: Travel Grant Application	98
	Appendix C: CRE Course Grant Application.....	108
	Appendix D: Email to Incoming Students Who are Interested in UR.....	112
	Appendix E: Summer Research Program Assessment	115
	Appendix F: Naming Document for Development	120
	Appendix G: Thank You Card Selection for Donors, Undergraduate Research Grants	127
	Appendix H: CRE application for courses	129
	Appendix I: Research Fellows Application.....	132
	Appendix J: Undergraduate Research Assessment Survey (Qualtrics).....	134
	Appendix K: 2017-2018 Program Review Report	141
	Appendix L: Self-Study Team Responses in Table Form, 2017-2018.....	151
	Appendix J: Vice Provost Response, 2017-2018	155

1 ABOUT OUR

1.1 Office Developments

The Office of Undergraduate Research (OUR) was established in August 2004. Academic Affairs created a 0.25 Director position and charged this individual with creating OUR to enhance opportunities for students and their faculty mentors across campus. A small budget for the office allowed a student hourly worker to assist in secretarial support. The Director position was increased to 0.5 time and a salaried 0.75 time office administrator was added in 2006. The office is comprised of:

1. Director
2. Assistant Director
3. CRE Coordinator
 - a. Curriculum Committee
4. Program & Outreach Coordinator
5. Office Specialist
6. Research Fellowship Coordinator
7. Faculty in Residence, Summer Research Opportunity Program
8. ERGO Editor
9. Graphic Designer
10. Student Ambassador(s)
11. Undergraduate Research Committee of Faculty

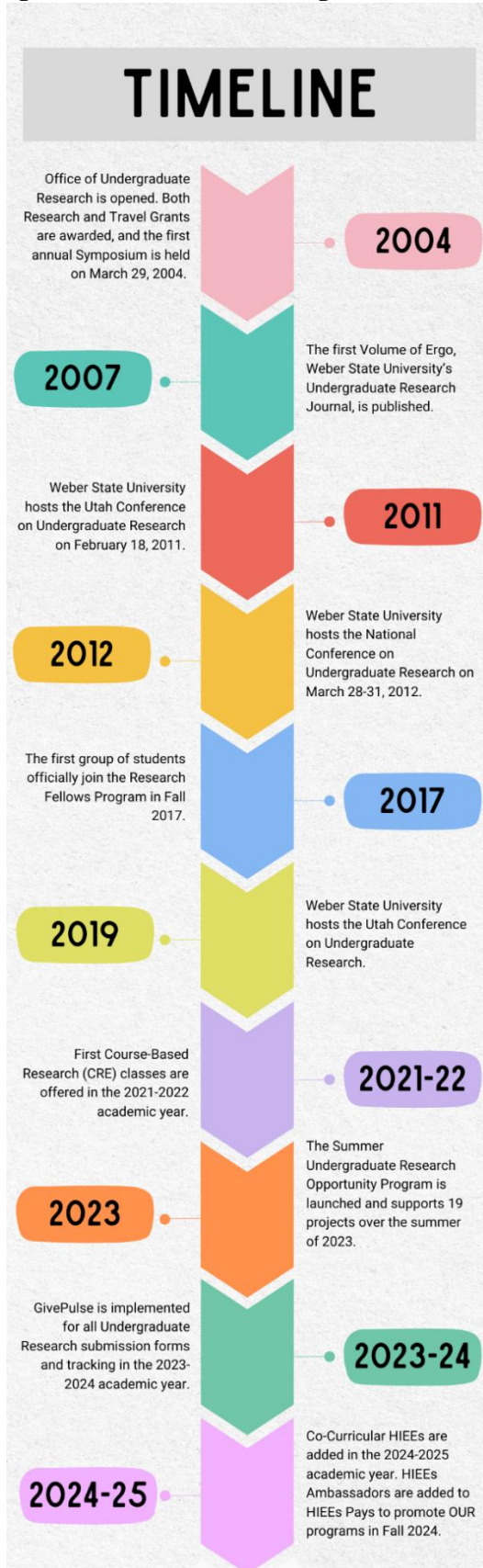
Upon its inception, a committee of faculty from all schools and colleges at Weber State University drafted an understanding of undergraduate research.

Undergraduate research includes scholarly and creative activities conducted by students in collaboration with mentors, for the purpose of examining and creating knowledge or works in ways consistent with practices within the discipline.

1.2 History of Program Developments

Over time, the opportunities for student involvement in, or dissemination of undergraduate research have expanded. Figure 1 provides a timeline of significant developments. Table 1 in Section 2 provides a description of undergraduate research opportunities offered by OUR.

Figure 1: Timeline of Undergraduate Research Developments at Weber State University



During the fall of 2004, a committee of faculty were assembled and criteria drafted for student research grants that also allowed for students to apply for travel to disseminate at regional or national conferences, including the Utah Conference on Undergraduate Research (UCUR) and the National Conference on Undergraduate Research (NCUR). The first call for proposals occurred in late fall 2004 with two calls for proposals in each of the fall and spring semesters (still to this day, there are 4 calls for proposals in the academic year). The first campus wide symposium for students to disseminate the results of their research was held in March of 2004. Since this time, a campus-wide research and engagement symposiums is held in both the fall (December) and spring (April) semesters. Travel grants are now a separate process from student research grants. Calls for travel grants happen at the beginning of each month with the budget equally divided between each month, allowing for rollovers each month for unused funds.

Four significant developments include:

1. Research Fellowship Program (2017-present): A 4-year scholarship program where students are research assistants in their first 4 semesters, and then they engage in an independent mentor-guided project in their last 4 semesters.
2. Summer Research Opportunity Program (summer 2023-present): An incentivized program for students and mentors to engage in research during the summer.
3. Curriculum based research experiences (CRE) (fall 2021-present): Courses with a significant research component can apply for a CRE attribute. The attribute appears on student transcripts. Professors who teach CRE courses are eligible to apply for funds to support the project(s).
4. Beginning spring semester of 2025, students can receive non-credit bearing CRE credit for participating in a co-curricular undergraduate research activity.

1.3 Vision, Mission, and Values

The Office of Undergraduate Research's Mission, Vision and Values

The mission for OUR was revised in 2023 to reflect development of new undergraduate research programs within OUR and opportunities for dissemination as well as changes in the university's mission. The vision, mission, and value statements were written by faculty representatives from various colleges including the School of Business and Economics, the College of Sciences, and the College of Social and Behavioral Sciences.

The Office of Undergraduate Research

Vision

To be a regional leader in undergraduate research and creative scholarship as a pivotal high impact educational experience.

Mission

The Office of Undergraduate Research at Weber State University fosters a campus-wide culture of undergraduate research and creative scholarship among students and faculty. Our mission is to engage students in meaningful mentored research experiences by financially supporting and coordinating scholarly activities, curriculum-based research, and travel opportunities for student dissemination.

Values

The Office of Undergraduate Research at Weber State University values:

1. valuing each student's individual learning experience
2. building a community of student scholars
3. cultivating an inclusive and belonging environment for students and faculty
4. providing research and creative scholarship as a valuable engaged learning experience
5. fostering faculty-student relationships and supporting faculty mentorship of undergraduate student research and scholarship
6. providing avenues for students to learn and grow in their field of study, take ownership of their work, develop resilience and confidence, and feel proud of their accomplishments.

Weber State University Mission, Vision and Values

In 2020, Weber State University engaged in a strategic planning process, culminating in the following. [Note: As of 5 June 2024, the strategic plan is in the process of being reviewed and revised.]

Mission

As of June 2024, this is in the process of being reviewed and revised.

Weber State University provides transformative educational experiences for students of all identities and backgrounds through meaningful personal connections with faculty and staff in and out of the classroom. The university promotes student achievement, equity and inclusion, and vibrant community relationships through multiple credentials and degree pathways, experiential learning, research, civic engagement, and stewardship.

Weber State University (WSU) is a comprehensive public university authorized to operate and confer degrees under Utah Code section 53B-6-101 et seq and its mission and roles are governed by Utah State Board of Regents policy 312. The university's mission is approved by the Weber State University Board of Trustees (March, 2021) and the Utah Board of Higher Education (July, 2021).

Vision

Weber State University will be a leader in transforming lives by meeting all students where they are, challenging and guiding them to achieve their goals academically and in life.

Values

Weber State University values:

- **EVERY INDIVIDUAL**
 - Embracing all identities through the promotion of belonging, creativity, uniqueness, and self-expression;
- **COLLECTIVE EXCELLENCE**
 - Fostering achievement and transparency in learning and discovery through collaboration; and
- **TRANSFORMATIVE EXPERIENCES**
 - Nurturing success through engaging, supportive, and personalized opportunities in a rapidly changing world.

WSU interprets this mission as having three Core Themes: Access, Learning, and Community. The OUR mission supports each of the University Core Themes.



Access: The access core theme reflects WSU's commitment to providing an affordable, quality education to communities with significant socioeconomic and cultural differences.

Learning: The learning core theme is central to WSU's mission to provide transformative educational experiences and its commitment to support student success at every stage of the student life cycle.

Community: The community core theme reflects WSU's role as an educational, cultural, and economic steward for the region.

1.4 OUR and the University's Core Themes of Access, Learning, and Community

OUR and Access: OUR provides opportunities to engage in scholarship and research across all disciplines, and provides financial support and scholarships to participate in undergraduate research.

OUR and Learning: OUR provides financial support for engaged learning opportunities for students throughout their academic career, including incoming students through the Undergraduate Research Fellowship Program, and for students needing support for mentor-guided research and travel to disseminate.

OUR and Community: Opportunities for undergraduate research are available across all disciplines, providing opportunities for a sense of belonging and being part of a research community. Students engaged with faculty on research, scholarly and creative activities. Undergraduate research projects can be done in collaboration with community engaged learning or community not-for-profits.

1.5 Undergraduate Research as a High Impact Educational Experience

In accordance with Utah System of Higher Education (USHE), Weber State has adopted an educational policy of students completing two high impact educational experiences (HIEEs) by the time that they graduate. Ideally, Weber State would like students to complete one during the student's first 30 credit hours and the other related to their major. Weber State has a Vice Provost dedicated to high impact educational experiences (among other things) and has established the Wildcat Advantage Program to encourage and incentivize participation in HIEEs. More information about the type of high impact programs and experiences offered at Weber State can be found here: <https://weber.edu/hiee>.

By definition, undergraduate research provides an "engaged learning environment founded on extensive personal contact" with a faculty mentor. Students participating in undergraduate research are more likely to pursue graduate education and continue pursuing research activity (Hathaway et al. 2002). Undergraduate students who have engaged in research develop critical thinking and problem-solving skills that are difficult to acquire in a traditional classroom setting but important for their success in life (Lopatto 2010). Lopatto (2010) further notes, "Undergraduate researchers learn tolerance for obstacles faced in the research process, how knowledge is constructed, independence, increased self-confidence, and a readiness for more demanding research."

1.6 Office of Undergraduate Learning and Program Outcomes

During the Fall term of 2024, OUR revised learning and program outcomes. This was a collaborative effort with input from the Vice Provost and professors in business and economics, sciences, and social and behavioral sciences.

Learning outcomes include:

- Knowledge and Skills: Students will acquire the knowledge and skills of a research process.
- Dissemination: Students will be able to disseminate their project or the results of their research project to an audience wider than their research group or mentor.

Assessment of learning outcomes:

1. *The Undergraduate Research Student Assessment:* This is a self-report assessment distributed at the Undergraduate Research Symposium (See Section 11 on Assessment; and Appendix J).
2. *GivePulse pre and post assessment instruments for the Summer Undergraduate Research Opportunity Program:* These are completed by students and mentors at early stages of a project and

then again upon conclusion. The assessments have been developed for the summer research opportunity program. Our is assessing this process and determining if it is a good process to extend to the Research Fellowship Program.

3. *Forthcoming*: OUR is Working with Academic Affairs on a mentor assessment instrument and process for curricular and co-curricular research-based experiences (CRE). The CRE attribute is used to designate courses with a significant undergraduate research (or project component). Currently in process is the development of assigning the attribute to co-curricular research experiences. The two learning outcomes above will be assessed for both curricular and co-curricular UR experiments. During the fall term of 2024, workshops have been scheduled to develop the assessment rubric and process.

Program Outcomes include:

- Students will gain intellectual independence and creativity in designing and executing their project.
- Students will gain a sense of belonging to a research and/or university community.
- Students will critically reflect on their undergraduate research experiences to assess alignment with their personal and professional goals.

These outcomes are primarily assessed using the *Undergraduate Research Student Assessment*. The pre/post GivePulse assessment survey used for the summer program includes questions to assess program outcomes as well, but only for summer research participants.

2 CORE PROGRAMS, LAUNCH DATES, AND DESCRIPTIONS

OUR provides resources and opportunities for students from each college engaged in undergraduate research, scholarly, and creative activities. OUR also provides support for students to disseminate at regional/national professional conferences, the Utah Conference on Undergraduate Research, and the National Conference on Undergraduate Research. OUR also publishes *ERGO*, the WSU undergraduate research journal.

Table 1: Weber State Undergraduate Research Opportunities

	Program	Year Launched	Description
1	Research Grants	2004	4 calls for research proposals throughout the academic year.
2	Travel Grants	2004	Travel grants to conferences and workshops; 12 calls per year.
3	Research & Engagement Symposiums (Formerly Research Symposium)	2005 (spring) and 2022 (fall)	Two undergraduate research symposiums, one per semester. Opportunities include poster presentations, oral presentations, and artistic displays or performances.
4	Research Journal, <i>ERGO</i>	2006	An annual undergraduate research journal, <i>ERGO</i> . The journal is on its 18th edition with a publication date of Spring 2025.
5	Hosting Conferences—NCUR	2012	The National Conference on Undergraduate Research is hosted annually by various universities. The NCUR is associated with the Council on Undergraduate Research.
6	Hosting Regional Conferences—Utah CUR	2011/2019	Utah universities rotate the hosting of the conference. Weber State will host the 20 th anniversary during the spring semester of 2026.
7	Research Fellowship Program	2017	A 4-year competitive scholarship for student-faculty research collaborations.
8	Curricular/Co-curricular Research Experiences (CRE)	2021 (curricular) 2024 (co-curricular)	Curricular CREs are tied to courses that engage students in a significant research component. Faculty can apply for financial assistance. Co-curricular CREs are non-credit bearing support for students who engage in one of the various undergraduate research opportunities through OUR or outside of OUR.
9	Summer Research Opportunity Program (SUROP)	2023	A competitive research program for faculty mentors and student researchers. The program provides stipends for each faculty and student research team.

2.1 Research Grants

Providing undergraduate research grants is a vital program offered by OUR. OUR solicits requests for proposals (RFPs) twice per each fall and spring semester. Students write and submit grants to support their research projects (Appendix A). Each proposal is read and ranked by the Grants Committee (Tables 2 and 3). After reading and ranking the proposals, the committee convenes for discussion and the awarding of funds. The grant application was revised in the fall semester of 2023.

OUR provides a video workshop on completing a grant application for student applicants. Students must complete the workshop and a quiz about the workshop before submitting their grant application.

The process of completing a grant is explained in a step-by-step basis on the OUR website, under the grant dropdown menu: <https://www.weber.edu/OUR/learn-about-grants.html>.

Table 2: Grant Committee Representation from each School/College^a

Year	ART/HUM	BUS/ECON	EDUC	ENG/TECH	HEALTH	SCIENCE	SOC/BEH
2017-2018							
2018-2019	Communication	Bus Adm	Nutrition (DA)	Engineering	Dental Hygiene (FM)	Chemistry	History
2019-2020	Performing Arts		Nutrition (DA)		Dental Hygiene (FM)	Chemistry	History
2020-2021	Performing Arts		Nutrition (DA)	Mechanical Engineering Tech (RH)	Dental Hygiene (FM)	Chemistry	History
2021-2022	Performing Arts		Nutrition (DA)	Mechanical Engineering Tech (RH)	Dental Hygiene (FM)	Chemistry	Psychological Sciences
2022-2023	Performing Arts	Mgmt Info Systems	Nutrition (SK)	Mechanical Engineering Tech (CH)	Dental Hygiene (CC)	Microbiology	Psychological Sciences
2023-2024	Performing Arts	Mgmt Info Systems	Nutrition (SK)	Mechanical Engineering Tech (CH)	Dental Hygiene (CC)	Microbiology	Psychological Sciences

^a Parentheses represent the initials of the representative to demonstrate that there are changes in representatives from the same department.

Table 3: Current Undergraduate Research Committee

Name	College
Yu-Jane Yang	Telitha E. Lindquist College of Arts & Humanities
Lixuan (Grace) Zhang	John B. Goddard School of Business & Economics
Sachini Kodi	Jerry & Vickie Moyes College of Education
Christian Hearn	College of Engineering, Applied Science & Technology
Chere Clawson	Dr. Ezekiel R. Dumke College of Health Professions
Katrina Twing	College of Science
Azenett Garza	College of Social & Behavioral Sciences

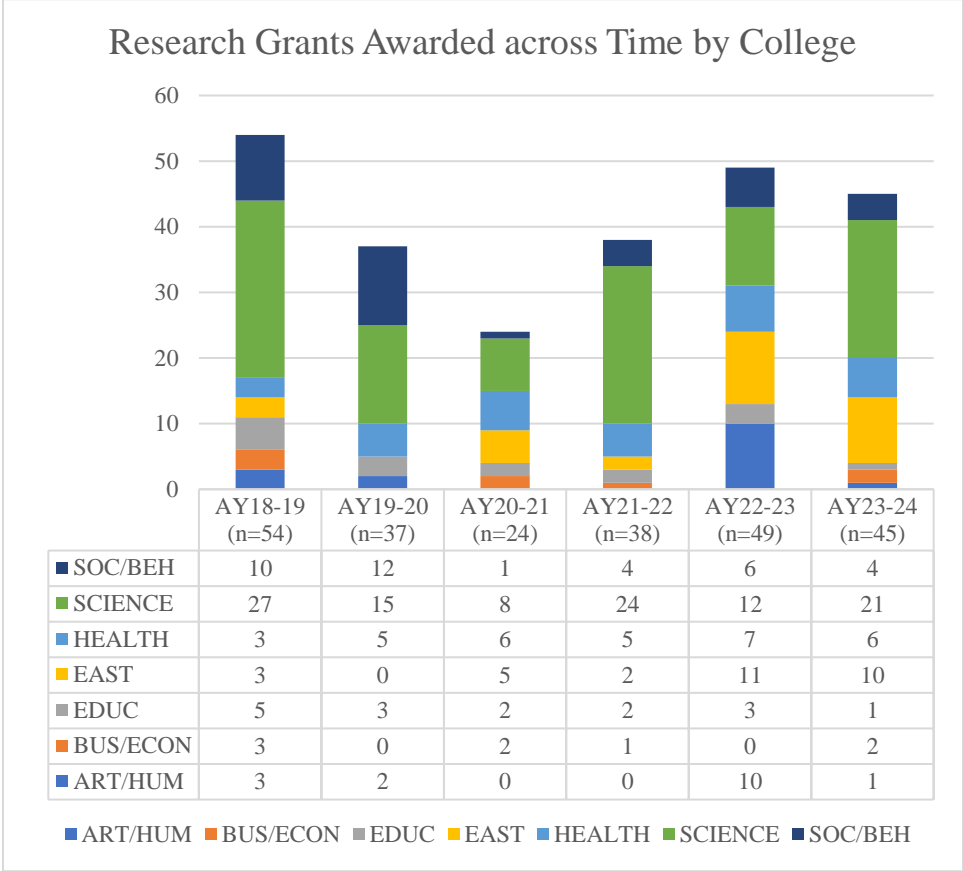
Types of grants and data about grant awards

Student projects are funded through two different grant opportunities, long-term and short-term grants. Long-term grants support substantial, in-depth projects that normally span two or more semesters and may include summer research. The maximum request is \$3500 and may include a research scholarship which can be used to support the student during the project. The research scholarship is similar to offering a research stipend. A key difference is in how it is/isn't taxed like income. The scholarship first pays out any university-related expenses; if all expenses are paid, the remaining amount of the scholarship is dispersed to the student. Short-term grants provide for smaller student research projects including preliminary or exploratory research and follow-up expenses associated with larger projects.

These grants have a \$1000 maximum request. Short-term grants are also used for research projects associated with a course requirement. Research scholarships are not allowed for short-term grants.

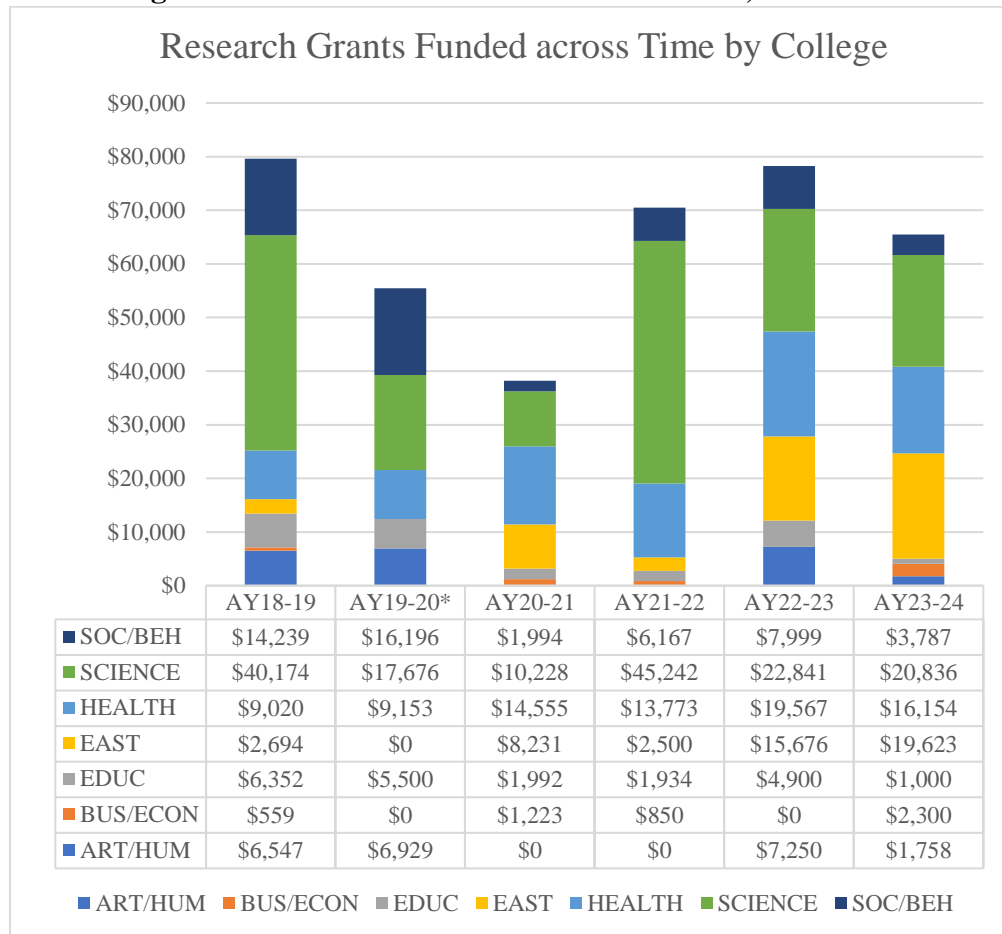
Projects funded during the review period from each college are shown in Figures 1a and 1b. Over the review period, a total of 247 research grants were funded (\$387,421) through OUR.

Figure 1a. Research Grants awarded, 2019-2024



* Acceptance rates by year: 65% in AY18-19; 67% in AY19-20; 77% in AY20-21; 78% in AY21-22; 78% in AY22-23; 87% in AY 23-24

Figure 1b. Research Grants Funded Amounts, 2019-2024



*Note: During the 2019-2020 academic year, grants that were awarded totaled \$55,454. Of this total, \$8411 were canceled due to COVID research restrictions.

During the 2023-2024 academic year, students from each of the 7 colleges and schools submitted a grant application (52 applications in total). The below figure demonstrates the quantity of proposals and the acceptance rates.

Figure 1c. 2023-2024 Applications and Acceptances.

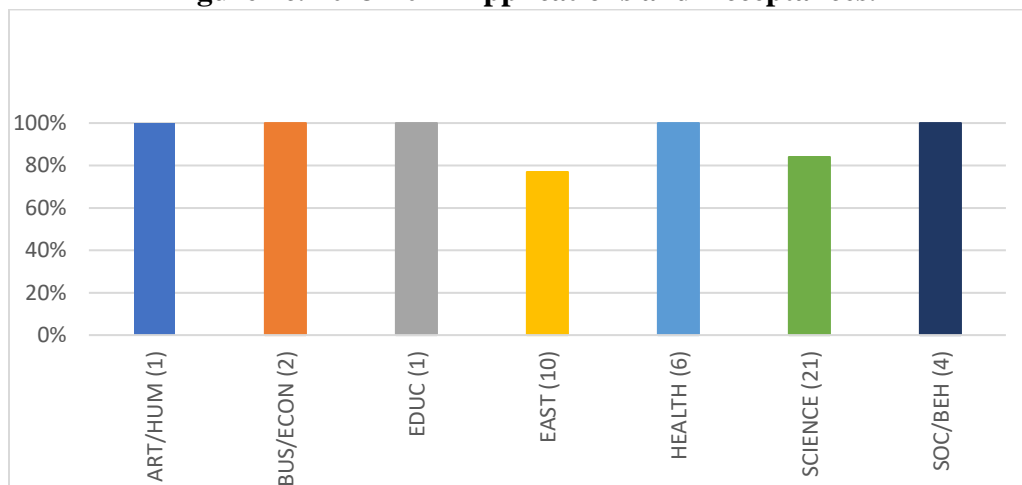
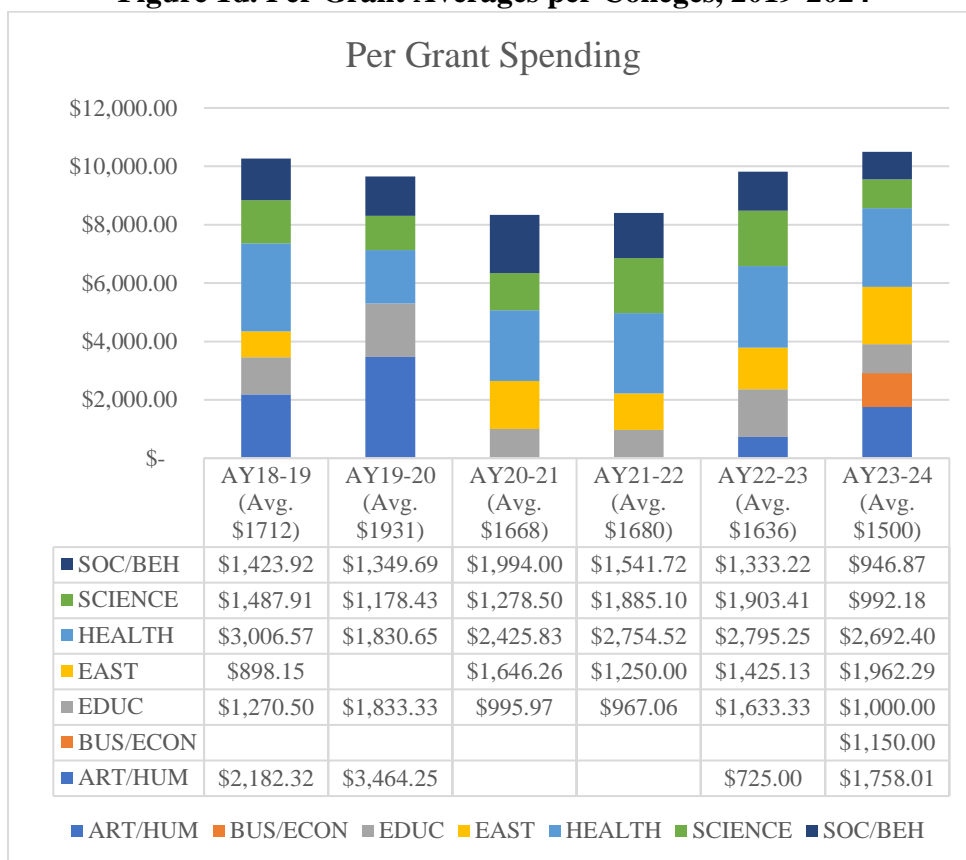


Figure 1d. Per Grant Averages per Colleges, 2019-2024



Key Take-Aways

1. Consistently across years, Science projects dominate grant awards. Social and Behavioral Sciences, Health Sciences, and recently, Engineering are receiving a number of awards.
2. In terms of per grant amounts, Health Science awards tend to be the largest.
3. During the 2023-2024 academic year, grants from each of the 7 colleges were awarded with an 100% acceptance rate for all but Engineering (10 grant applications) and the Sciences (21 grant applications).

Concerns/Issues with Grant Process and Offerings

The below issues have been raised by the current undergraduate research review committee

1. Definition of long-term and short-term grants: currently we offer long-term grants that span multiple semesters. Students can request a research scholarship to compensate for the time commitment. The grant maximum allowed is \$3500, with the scholarship not exceeding \$2500 of the request. Short-term grants are projects spanning a single semester. The maximum grant allowed is \$1000.
 - a. Issue: Scholarship can currently be requested for long-term grants for required courses (e.g., 2 semester capstones).
 - b. Issue: Long-term grants provide an opportunity to circumvent the \$1000 limit for short-term grants; this happens when short-term grant is presented as spanning more than one

- semester (e.g., this semester the student will do a literature review and next semester the research).
- c. Issue: CRE courses can apply for CRE grants. If a class receives a grant (maximum is \$2000 and based on \$150 per students enrolled), then perhaps this should factor into the grant award.
 2. Matching funds: Some view the lack of matching funds or departmental contributions negatively whereas others do not (e.g., department doesn't have the budget to support). Current proposal requests a copy of email correspondence with the department chair to demonstrate that the student took the initiative to ask, even if it did not result in departmental funds. On one hand the committee does not want to penalize a student if a department does not financially support. However, it is unclear if the lack of support is due to the quality of the project or lack of departmental funds.
 3. Mentor letters of support or recommendation. Prior to 2023-2024 academic year, students would submit the mentor's recommendation form along with their application, essentially eliminating the privacy of the mentor's recommendation. The current Director was uncomfortable with this process as it did not protect mentors and the integrity of the recommendation. Thus to address this concern, in 2023-2024, we did not ask students to submit the recommendation and instead OUR would send an email to each mentor and ask the mentor to send their recommendation directly to us. These recommendations were then placed in a shared Google drive for the UR committee. Then in 2024-2025 with the use of GivePulse Grant Management System, the mentor would automatically get a GivePulse survey link to complete a recommendation. While this seems like a streamlined process, it is a clunky process; the recommendation is not synced with the student's grant application. Instead, the UR committee rep needs to go to another place in GivePulse to find and read the recommendation as it is not directly tied to the student's grant application (as we thought it would be). We are wondering if the goal of protecting the integrity of the recommendations warrants the tediousness of the new process.

Undergraduate Research Grants and OUR Learning Outcomes

1. Knowledge and Skills: By participating in an extensive faculty-mentored project, students will be exposed to the knowledge and skills of a research process for their discipline.
2. Dissemination: All students who receive an undergraduate research grant are required to disseminate at the Weber State University Fall or Spring Research and Engagement Symposiums. Often students also present at the Utah Conference on Undergraduate Research, the National Conference on Undergraduate Research, or professional conferences. OUR provides funding for travel to conferences (a competitive process and depending on budget).

2.2 Travel Grants and Dissemination

OUR accepts travel grants from students to disseminate research at professional conferences and meetings. Travel to disseminate provides an opportunity to meet the Dissemination Learning Outcome. The process for submitting a travel grant was amended beginning 2024-2025 academic year. A copy of the travel grant application is presented in Appendix B. Currently, students have 45 days from acceptance to submit a travel grant request. Requests are submitted by the first Tuesday of each month. Prior to this submission policy, students could submit anytime throughout the year (within 30 days of acceptance), but unfortunately, this would exhaust funds budgeted for travel by late spring semester, eliminating options for travel in the summer months. To accommodate travel throughout the year, the travel budget was divided by 12 months. Any unused funds from a month, carry forward to the next. This policy change accommodates conference and meeting schedules throughout the year. Students may request up to \$1,000 for travel to present at professional conferences and meetings. Each proposal is reviewed by the director for compliance with travel policies. During the program review period 246 undergraduate travel grants (Table 2a) were funded totaling \$191,430 (Table 2b), averaging \$778 per grant.

Funding for student travel is provided by Academic Affairs. Requests and corresponding funding for travel should stabilize around \$36,000 per year. Up until the 2024-2025, OUR also supported travel for graduate students, up to \$500 per grant.

Once a student receives an award, they must complete the following:

1. Notice of Funding: OUR policies for student travel
2. Photo Release
3. Safety Forms (completed with the Study Abroad Office)
 - a. Clery: Provides WSU contact information (filed with Weber State law enforcement). Needs to be completed for any college-related overnight travel that includes students
 - b. SARA: The State Authorization Reciprocity Agreements (SARA) is a voluntary agreement between states, territories, and districts that establishes national standards for distance education programs
 - c. WSU Proposal: Student information and contact information.
 - d. Field Trip Release: Travel and contact information, follow Weber State policies

Data about travel grants are presented in Figures 2a and 2b.

Figure 2a. Travel grants awarded, 2018-2024.

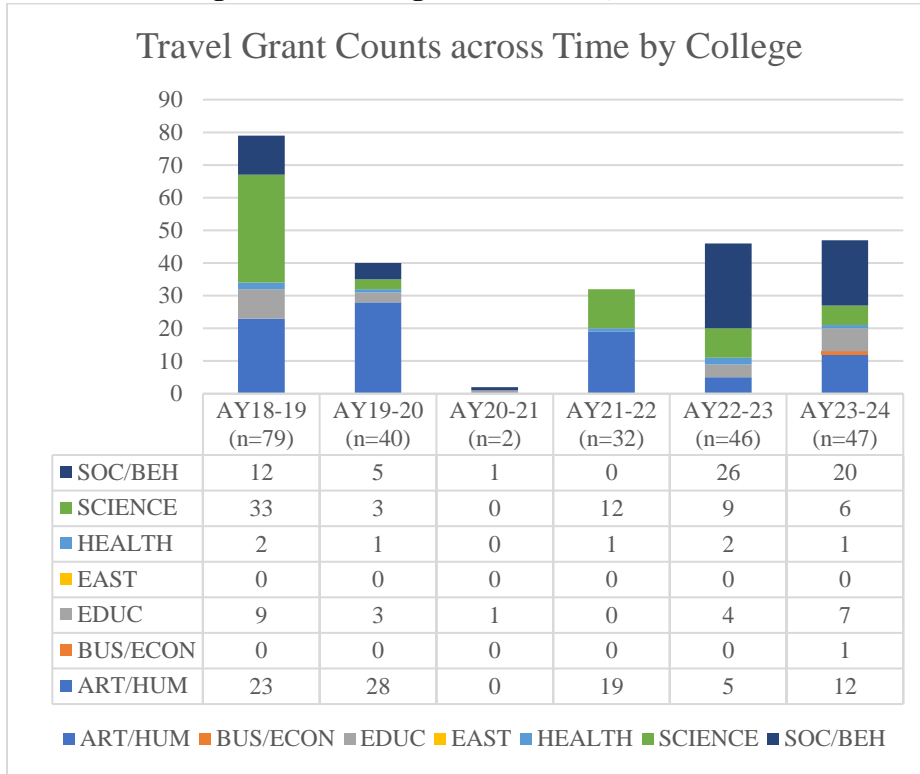
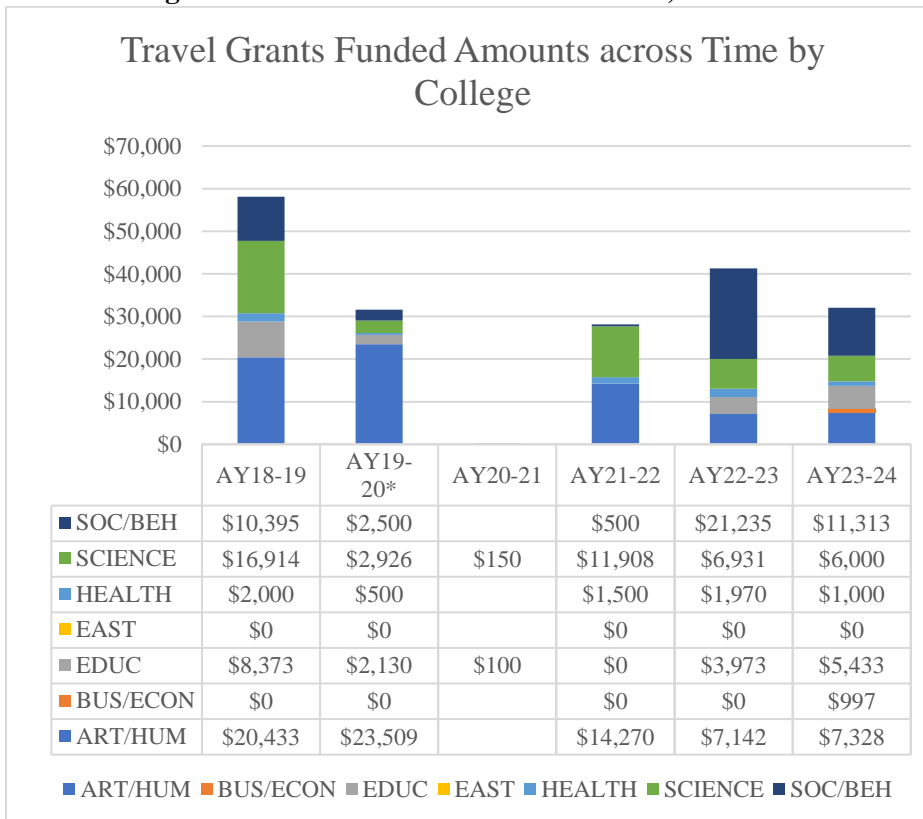


Figure 2b. Travel Grant Funded Amounts, 2018-2024



*Note: During the 2019-2020 academic year, grants that were awarded totaled \$31,565. Of this total, \$11,468 grants were canceled due to COVID travel restrictions.

A list of conferences and locations that students traveled to during the 2023-2024 academic year is provided in Table 4.

Table 4: Student Conference Presentations 2023-2024 AY

College	Name of Conference	Location
SCIENCE	American Geophysical Union (AGU) Fall meeting 2023	San Francisco, California
SCIENCE	American Society of Microbiology-Microbe	Atlanta, Georgia
SCIENCE	Geological Society of America Connects 2023	Pittsburgh, Pennsylvania
SCIENCE	GSA 2024 Joint Cordilleran And Rocky Mountain Section Meeting	Spokane, Washington
SCIENCE	Ornithological Congress of the Americas	Gramado, Brazil
SOC/BEH	2023 Annual Meeting of the Society for Psychophysiological Research (SPR)	New Orleans, Louisiana
SOC/BEH	2023 American Society of Criminology Annual Meeting	Philadelphia, Pennsylvania
SOC/BEH	Academy of Criminal Justice Sciences	Chicago, Illinois
SOC/BEH	American Psychological Association Division 45	San Diego, California
SOC/BEH	Model United Nations National conference	Erfurt Germany
SOC/BEH	Society for Psychophysiological Research	Vancouver, British Columbia, Canada
SOC/BEH	Society for the Psychological Study of Social Issues	Denver, Colorado
SOC/BEH	Society for the Study of Human Development 2023 Conference	Philadelphia, Pennsylvania
SOC/BEH	Western Association of Criminal Justice	Spokane, Washington
SOC/BEH	Rocky Mountain Psychological Association	Denver, Colorado
EDUC	American Society for Nutrition 2023	Boston, Massachusetts
BUS/ECON	International Studies Association- West Pasadena 2023 Conference	Pasadena, California
HEALTH	American Dental Hygienist's Association Annual	Chicago, Illinois
EDUC	2024 AQQEP Quality Assurance Symposium	Orlando, Florida
EDUC	ACA National Conference	New Orleans, Louisiana
EDUC	Food and Nutrition Conference & Expo	Denver, Colorado
EDUC	NCA 109th Annual Convention: Freedom	National Harbor, Maryland
ART/HUM	College English Association	Atlanta, Georgia
ART/HUM	Digital Humanities Summer Institute	Victoria, British Columbia
ART/HUM	Fall National College Media Convention	Atlanta, Georgia
ART/HUM	Mormon Historical Association Conference	Rochester, New York
ART/HUM	Pop Culture Association Annual Conference	Chicago, Illinois
ART/HUM	Rocky Mountain Modern Language Association	Denver, Colorado
ART/HUM	Special Interest Group on Design of Communication	Boston, Massachusetts
ART/HUM	The York Theatre Company	New York, New York
ART/HUM	Western Literature Association	Fort Hall, Idaho

In addition to professional meetings and conferences, OUR provides funding in separate RFPs to send students to the National Conference on Undergraduate Research, and the Utah Conference on Undergraduate Research.

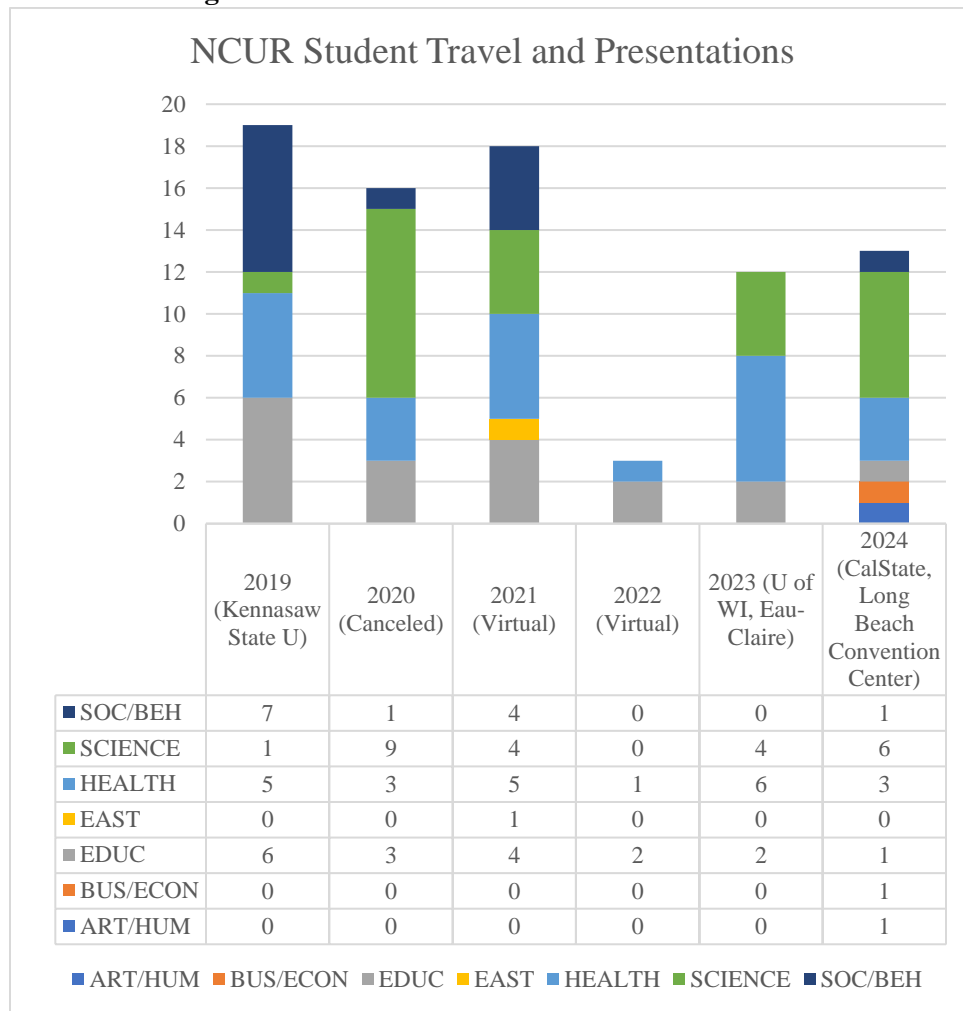
2.2.1 Conferences on Undergraduate Research

OUR also supports student travel to the National Conference on Undergraduate Research (NCUR) and the Utah Conference on Undergraduate Research (UCUR).

NCUR

Funding for NCUR travel is provided by Academic Affairs. In order to allocate funds within the budget, OUR will review abstract proposals (i.e., send out a call for abstract submissions) in advance of the NCUR deadline for abstract submissions. The call by OUR is typically one month in advance of the final NCUR deadline. We will notify students that we will support their travel and registration to NCUR if their abstract is accepted by the NCUR review team. To date, we have not declined funding to any student who submitted their abstract in advance to OUR.

Figure 3. NCUR Student Travel and Presentations



Faculty Travel to NCUR

A small amount of money has been secured through the Office of Academic Affairs to support faculty mentor travel. These funds are provided for faculty to accompany their student disseminating at a professional conference or meeting. The intent is for the faculty member to accompany the student and ensure that they become acquainted with the culture of the professional conference setting and receive support at the meeting.

A list of faculty and their fields who have traveled to NCUR over the review period is presented in Table 3.

Table 3: Faculty who traveled to NCUR

Name	Field	NCUR
Julian Chan	Mathematics	2019*
David Aguilar-Alvarez	Nutrition	2019, 2023*
Matthew Nicholaou	Medical Laboratory Sciences	2019, 2023, 2024
John Cavitt	Zoology, Director of OUR	2019*
Therese Cavlovic	Economics, Director of OUR	2024*
Tracy Covey	Chemistry/Biochemistry	2024
Jon Marshall	Zoology	2024
John Mull	Zoology	2024*

* OUR funded

UCUR

The mission of the Utah Conference on Undergraduate Research (UCUR) is to promote undergraduate research, scholarship, and creative activity, done with the mentorship of a faculty member or others, through an annual conference. The idea for a national conference open to all undergraduates was conceived and first implemented at the University of North Carolina at Asheville (UNCA) in 1987. Taking NCUR as inspiration, in 2005, a Utah Undergraduate Research Day was approved. The first annual Utah Conference on Undergraduate Research (UCUR) was hosted at the University of Utah on February 2, 2007. Almost 300 undergraduate student researchers from almost every institution of higher education in the state of Utah shared their research in the form of posters and oral presentations. Conference attendees were welcomed by former U.S. Senator Jake Garn, Governor Jon M. Huntsman, Jr., and University of Utah President Michael K. Young. Since its founding, UCUR serves as the culminating event of Undergraduate Research & Creative Achievement Week as designated by the Governor of Utah.

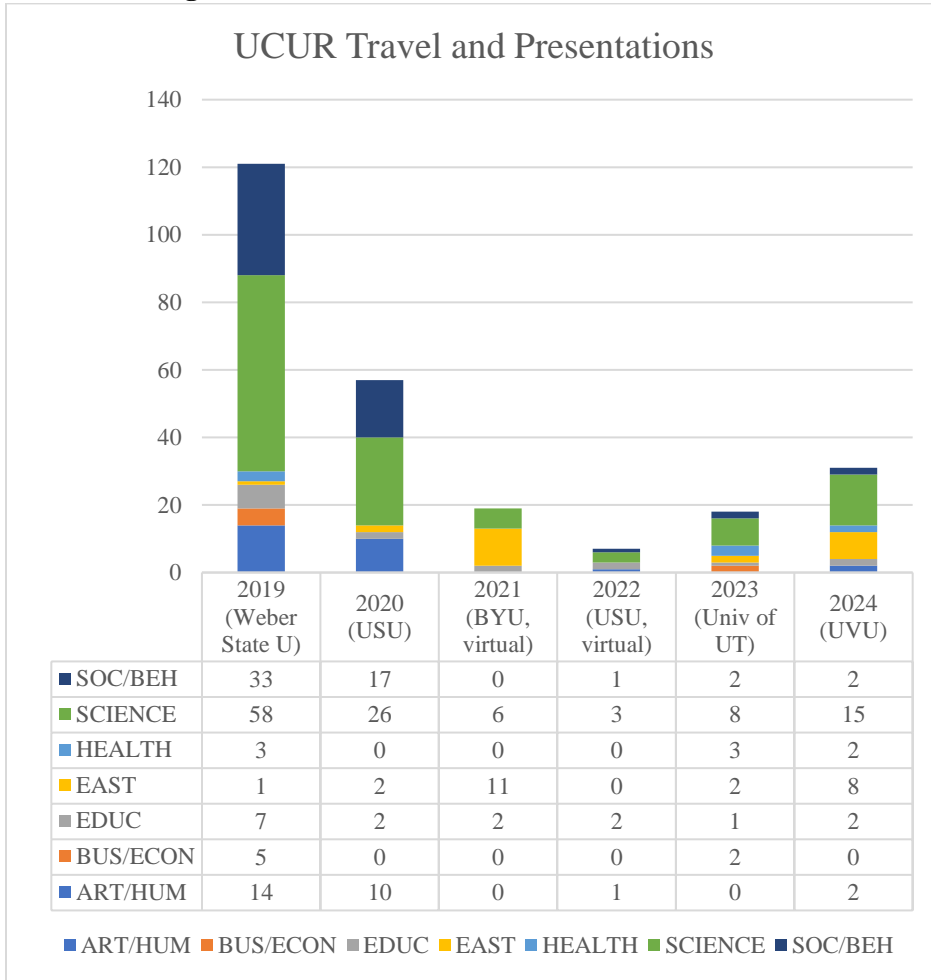
The 2026 UCUR conference will mark the 20 year of the first undergraduate research day in Utah. The 2026 UCUR conference will be hosted by Weber State University.

In collaboration with the Utah System of Higher Education, the following institutions collaborate on the annual Utah Conference on Undergraduate Research.

- Brigham Young University (a UCUR hosting site)
- Salt Lake Community College
- Snow College
- Southern Utah University (a UCUR hosting site)
- University of Utah (a UCUR hosting site)
- Utah State University (a UCUR hosting site)
- Utah Tech University (a UCUR hosting site)
- Utah Valley University (a UCUR hosting site)
- Weber State University (a UCUR hosting site)
- Westminster University (a UCUR hosting site)

Student travel to UCUR over the review period is presented in Figure 4

Figure 4. UCUR Student Travel and Presentations



2.3 Internal Dissemination

2.3.1 Undergraduate Research and Engagement Symposium

Summary

OUR has been hosting an annual research symposium at the end of the spring semester of each academic year since 2004. The symposium provides an opportunity for WSU students to disseminate the results of undergraduate research, scholarly, and creative activities. Presentations include posters sessions, oral presentations, and performance art presentations. The spring symposium also includes an awards luncheon where mentor and student research awards are presented for each College for their research and mentorship during the current academic year.

Significant changes

There have been three significant additions to the symposium. First, the research symposium was renamed to the Research and Engagement Symposium in 2022-2023 to include all types of student engagement in any of the high impact programs or experiences on campus. The Spring Research and Engagement Symposium is now organized and funded through Academic Affairs. Each high impact program (HIP) solicits abstracts from students in their respective areas. The organizing team consists of at least one member from each of the HIPs.

Second, a Fall Research and Engagement Symposium was added in December 2022 for the end of fall semester (early December); the fall symposium is organized by OUR and primarily consists of undergraduate research projects and CRE (curriculum based research experience) projects, but it is inclusive to other student engagement projects (just not to the extent as the Spring Symposium). The motivation for initiating a fall symposium was (1) to provide an outlet for students in CRE courses to disseminate (a requirement of a course having the CRE attribute); and (2) to provide a forum for students graduating at the end of a fall semester to present their research.

Third, all abstracts for either symposium are submitted through GivePulse.

The 3rd Fall Research and Engagement Symposium will be held on 3 December 2024. The Spring Research and Engagement Symposium will be held on 16 April 2024 (the 22nd year of holding a spring symposium). The December 2024 symposium will consist of 132 presentations:

- 6 oral
- 121 poster
- 5 visual arts

Nominations for Outstanding Student and Mentor Awards

Any student research who participated in any of the OUR programs over the course of the past 2 years will be asked to nominate a mentor. Similarly, any mentor of an undergraduate student research over the course of the past 2 years will be asked to nominate a student. One student and one mentor from each college will be recognized at the Spring Research and Engagement Symposium. A requirement for receiving the award is that the student must present at either the fall or spring symposium for the current year.

Figures 5 and 6 present participation at the fall and spring symposiums across time and by college (for undergraduate research projects only).

We have seen a gradual increase in the spring symposiums post-COVID restrictions. Further, we are seeing an overall increase in symposium participation by including a fall symposium. As an example in

the 2022-2023 academic year, the total number of presentations across both symposiums was 118. The number of fall symposium presentations for the past two years alone have surpassed this figure.

Figure 5: Fall Symposium

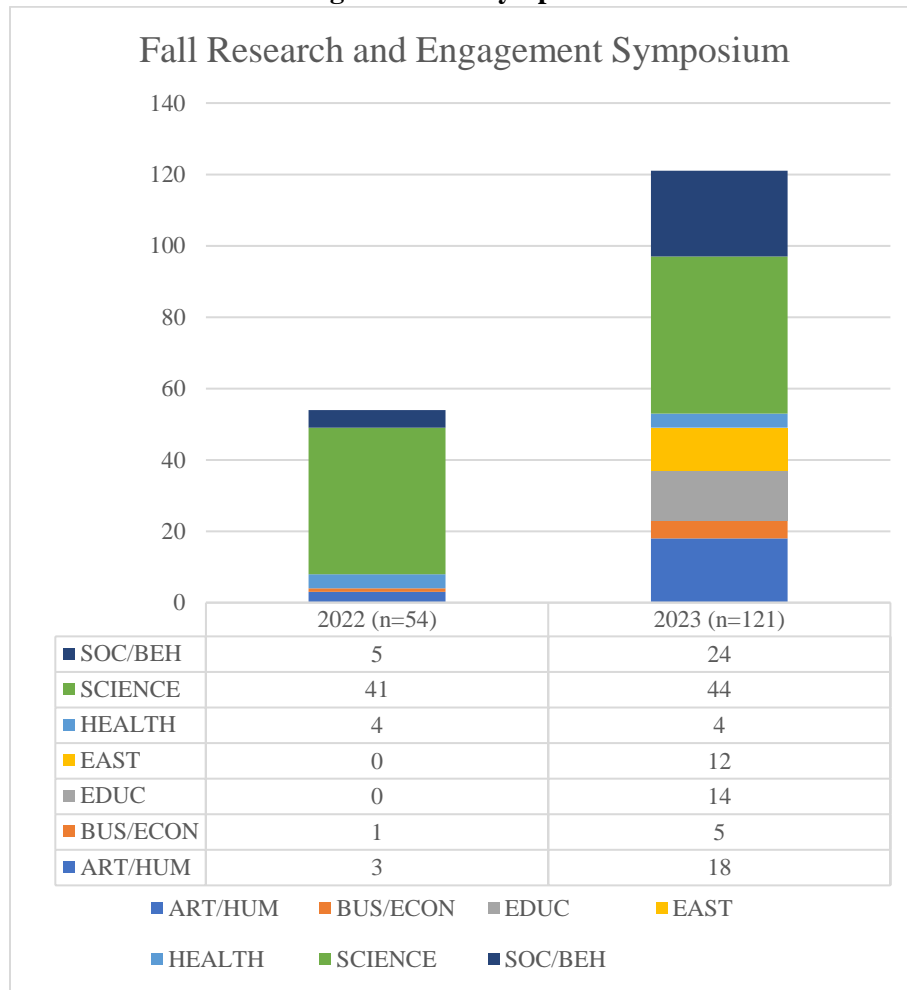
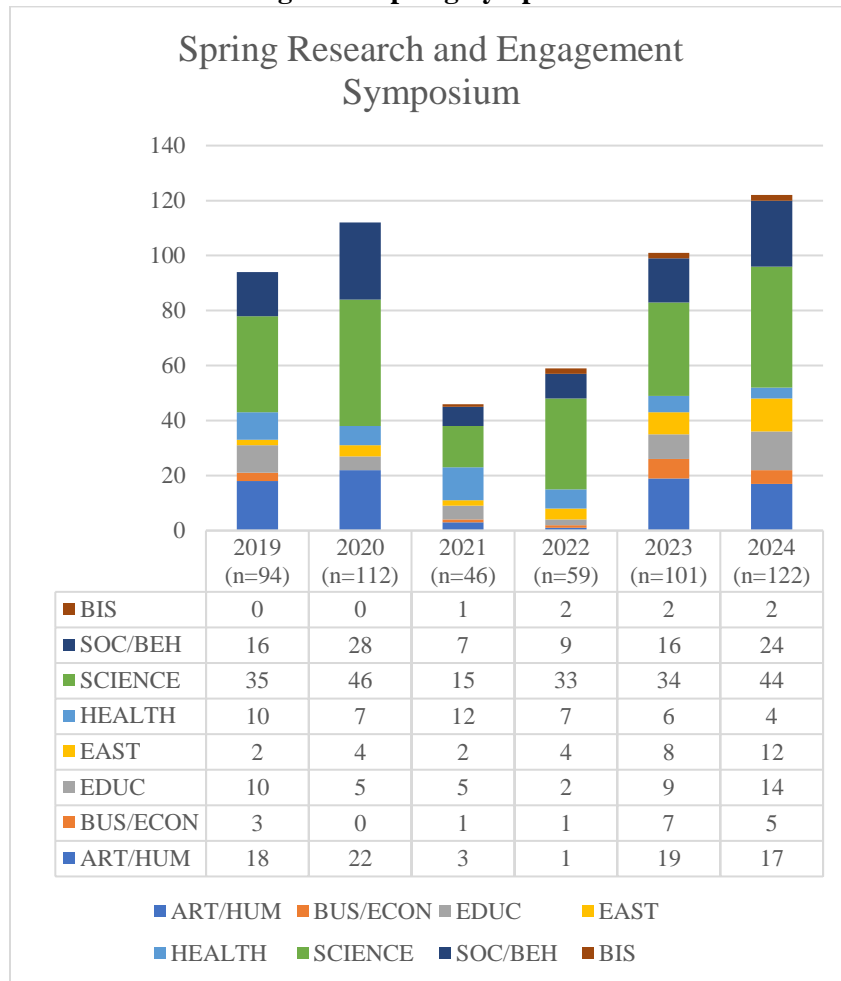


Figure 6: Spring Symposium

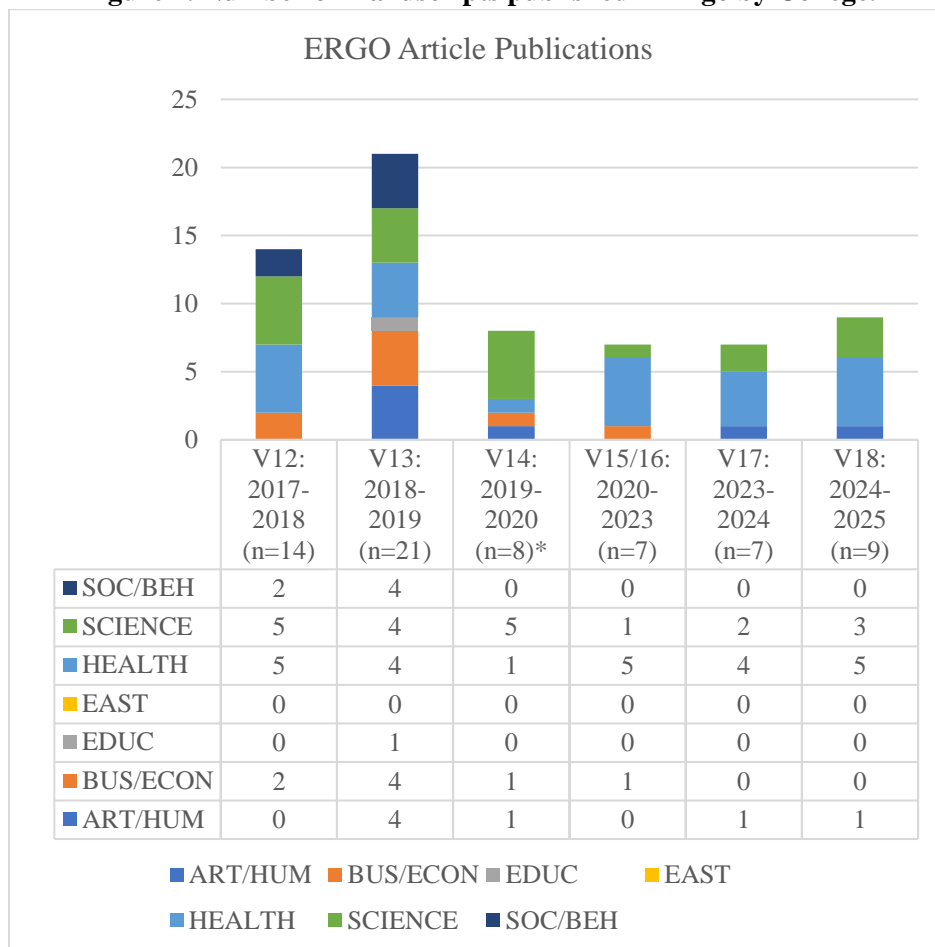


2.3.2 ERGO, undergraduate research journal published by Weber State University

ERGO is Weber State University's Undergraduate Research Journal. ERGO provides a unique opportunity for undergraduates to experience the process of publication and dissemination. The journal is led by a student editor employed by OUR and a graphic designer. Each article is peer reviewed by at least one faculty member within the student's discipline (and not by the student's mentor). ERGO accepts full-length articles and research summaries from students in all disciplines, including community-based research projects. The research abstracts for all students who received a travel grant for a given academic year are published in each volume. Seventeen volumes have been published since the first volume in spring 2007, with Volume 18 currently in production. Volumes 15 and 16 were combined into one journal due to the COVID pandemic. Volume 14 contained a School of Business and Economics sponsored COVID pandemic essay contest. Statistics on ERGO articles published in Volumes 12 through 18 are provided in Figure 7. OUR initiated a new submission process beginning January of 2024. Students can submit their manuscripts throughout the year, similar to a process used for academic journal publications. Prior to this change, all ERGO submissions were due in December, a period when students are in the process of finishing up classes. We hope that this change will increase the number of submissions. After a student submits a manuscript, the paper is sent out for review by a faculty member in the student's discipline.

Dissemination opportunities for WSU students also includes publication in Ergo.

Figure 7. Number of manuscripts published in Ergo by College.



* Volume 14 included a COVID Pandemic essay contest, financially supported by the School of Business and Economics. Six essays were published in Volume 14.

2.4 Curriculum and Co-Curricular Research Experiences (CRE)

Summary: Over the past eight years, the Office of Undergraduate Research has been successful in integrating, recognizing, and encouraging undergraduate research in Weber State University's academic curriculum. Building on the committee work described in our last program review, OUR has developed and implemented a new curricular attribute approved for courses with a significant research component. This attribute was given the acronym of CRE, for Course-Based Research. The CRE attribute was approved institutionally in the spring of 2021. Courses were eligible to begin applying for CRE designation starting in the fall of 2021 and applications have been accepted each subsequent semester. Courses qualifying for the CRE attribute must demonstrate the following criteria for their course-based research projects: Substance, Collaboration, Discovery, and Dissemination. Attribute approval can be given to a course or instructor-specific instruction of a course. Applications for the CRE attribute are reviewed each semester by a committee comprised of seven faculty members across the seven colleges. Courses are approved for a 5-year span and the CRE designation is reflected in the academic catalog and on student transcripts. Since fall of 2021, there have been 50 courses approved for the CRE attribute across six different colleges. OUR is committed to continued support of curricular research by offering funding opportunities for CRE-approved courses.

The website for faculty resources contains information about CRE attribute for courses. The website contains information on the following:

- What is the CRE attribute?
- Why should I apply for the CRE attribute?
- The benefits to students and faculty of curriculum-based research experiences
- The criteria for CRE designation
- CRE learning objectives
- Information for applying for CRE attribute (with a link to the GivePulse application and approval rubric). The application is in Appendix H
- Resources for creating a CRE course

CRE Core Learning Objectives

1. **Knowledge and Skills:** Students will acquire the knowledge and skills of a research process.
2. **Dissemination:** Students will be able to disseminate their project or the results of their research project to an audience wider than their research group or mentor.

CRE Project Criteria

1. **Collaboration:** Students, or student groups, work collaboratively with a faculty member.
2. **Discovery:** The outcome of the project is unknown to students.
3. **Dissemination:** The results of the project are disseminated.
4. **Substance:** The project represents a major component of the course (defined as $\geq 25\%$ of the total overall grade).

The Current CRE Curriculum Committee is presented in Table 4. The current list of courses with a CRE attribute is presented in Table 5.

Table 4: Current CRE Curriculum Committee

Name	College
Tracy Covey	Chair, College of Science
Elizabeth Sandquist	College of Science
Hailey-Gilen Hoke	Telitha E. Lindquist College of Arts & Humanities
Erik Stern	Telitha E. Lindquist College of Arts & Humanities
Nazneen Ahmad	John B. Goddard School of Business & Economics
	Jerry & Vickie Moyes College of Education
	College of Engineering, Applied Science & Technology
Jamie Wankier	Dr. Ezekiel R. Dumke College of Health Professions
Jim Hutchins	Dr. Ezekiel R. Dumke College of Health Professions
Sarah Herrmann	College of Social & Behavioral Sciences

Table 5: CRE course attribute approvals (2021-present)

Course	Course Title	Semester
CHEM 4250	Medicinal Chemistry	Fall 2021
ECON 4550	Introductory Econometrics	
ECON 4980	Research Methods	
GEO 3753	Geomicrobiology	
GEO 4800	Independent Research	
MICR 3753	Geomicrobiology	
PSY 3610	Research Methods	
ZOOL 3450	Ecology	
MICR 3154	Microbial Ecology	
ESS 4800	Directed Exercise Science Research	
NUTR 4520	Directed Undergraduate Nutrition Research	
NUTR 4830	Directed Readings Nutrition	
ANTH 3400	Archaeological lab techniques	
ANTH 4300	Anthropological Research Methods	
ANTH 4900	Senior Capstone Seminar	
BSAD 4680	Small Business Diagnostics	
BTNY 3454	Plant Ecology	
CHEM 4420	Quantum Chemistry	
CHEM 4990	Senior Seminar	
CHF 3850	Current research methods in Child and Family Studies	
DENT 4530	Principles & Application of DH Evidenced-Based Practice	
ECON 3300	Environmental Economics	
GEO 4560	Environmental Geochemistry	
GEOG 3080	Arid Lands: Resources, Landforms, and the Quest for Water	
GEOG 3790	Research Methods in Geography	
GEOG 4990	Senior Seminar in Geography	
HIST 4320	Stalin and the Soviet Experiment	
MLS 4803	Research Projects in MLS	
MLS 4804	Research Projects in MLS	
PSY 2800	Projects and Research	
PSY 2830	Directed Readings	
PSY 4800	Projects and Research	
PSY 4830	Directed Readings	
RHS 4800	Individual Projects	
SOC 4900	Senior Capstone Course	
THEA 3222	Lighting Design	
ZOOL 3450	Ecology	
ZOOL 4480	Aquatic Ecology	
PHYS 4400	Advanced Physics Laboratory	Fall 2022
MICR 3813	Bioinformatics	
PHYS 3190	Applied Optics	Spring 2023
CHEM 3510	Environmental Chemistry	
OCRE 3810	Program Evaluation in Recreation	Fall 2023
NEUR 4800	Projects and Research (Neuroscience)	
HIST 4630	Ancient and Colonial Latin America	
HIST 4650	Latin American History Since Independence	
COMM 3150	Communication Research Methods	Spring 2024
PHYS 4410	Materials Characterization Lab	
ZOOL 4920	Short course in Zoology-Bonneville Cutthroat trout	Fall 2024
HNRS 2050	Crossing Borders: The Human and Economic Face of Globalization	

The following figures provide a breakdown of CRE courses by year and college (Figure 8a), the number of students enrolled in the various CRE courses by year and college (Figure 8b), and grant awards for CRE courses (Figure 8c).

Figures 8a and 8b show that the majority of CRE courses and enrollments are split between SCIENCE and SOC/BEH with either none or very few CRE courses in EAST, BUS/ECON, and ART/HUM, providing indication of areas for growth. The 2-3 courses and enrollments in the BUS/ECON CRE courses are specifically in economics only.

Figure 8a: CRE Courses (students enrolled)

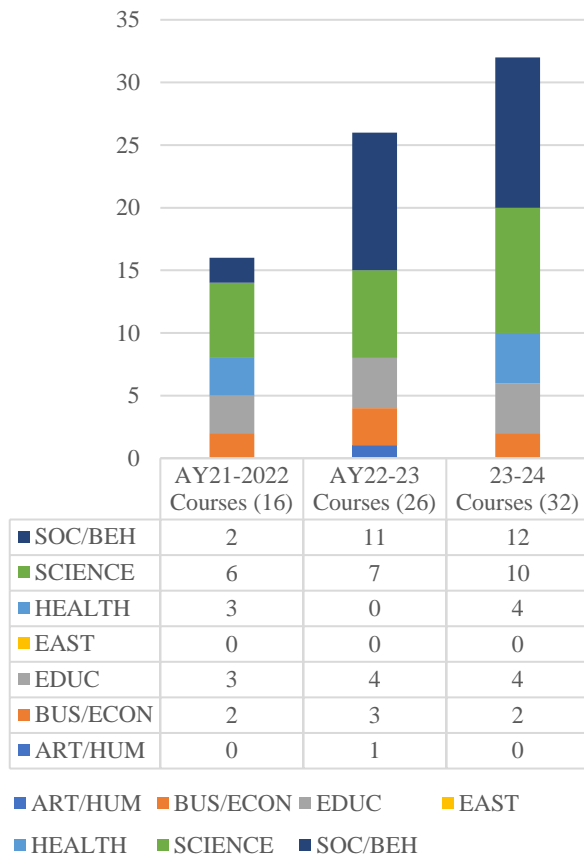
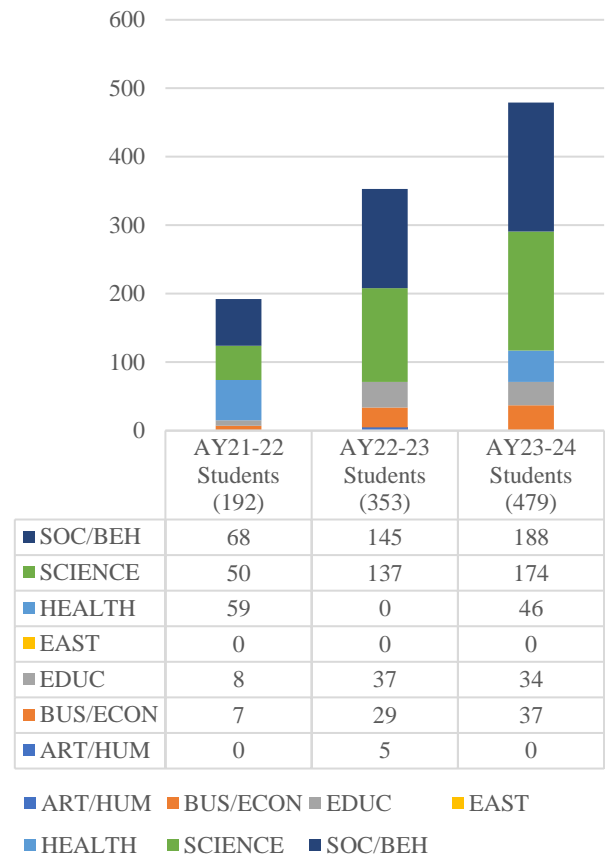


Figure 8b: CRE Student Enrollments



OUR has a small amount of money, ~\$8,000 per year, that can be used to financially support CRE courses. A request for CRE grant proposals was made in the spring semester of 2022 for fall 2022 CRE courses. Each semester, OUR sends out a call for CRE course grants. Figure 10 provides a list of funded courses by academic year and college. Table 6 provides information about the grants.

Figure 8c: CRE Course Grants

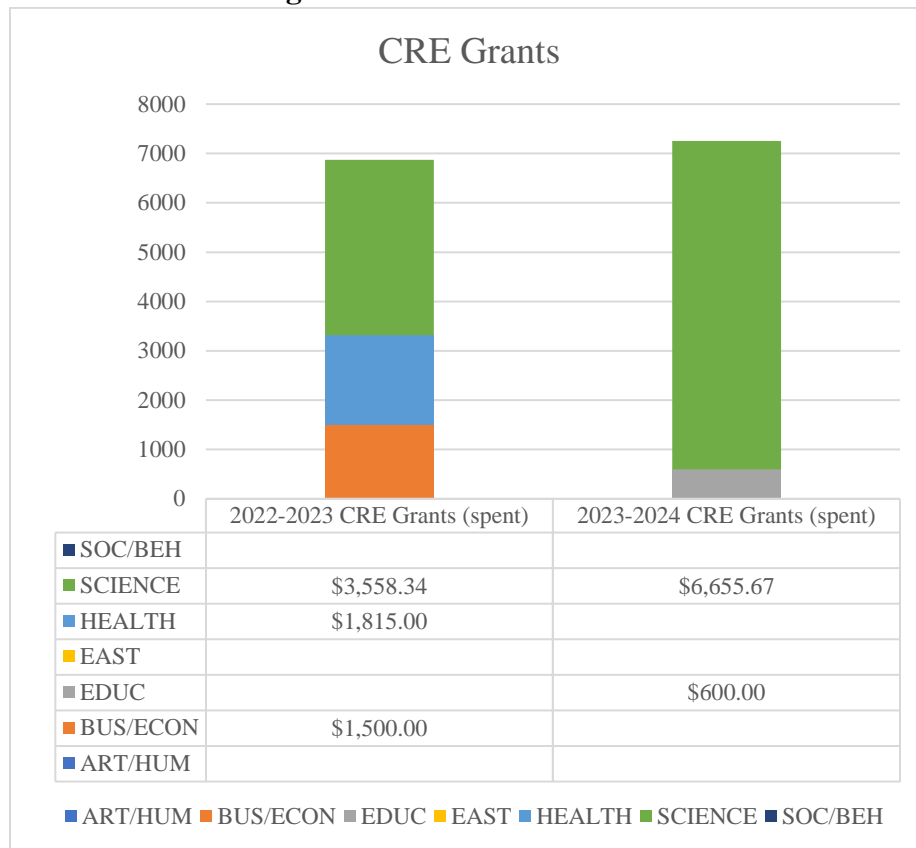


Table 6. CRE Course Funded Highlights

Course	Highlight
Microbial Ecology (MICR3753) and Environmental Chemistry (CHEM3510)	Microbial Ecology (MICR3753) and Environmental Chemistry (CHEM3510) piloted a collaborative, cross-discipline project fall 2023. This is a beneficial collaboration because the students need to share data across the CRE classes for their projects, which makes their results more impactful. Additionally, posters were presented at the Fall 23 symposium. (Funded in part by Katrina's CRE grant)
Medicinal Chemistry (CHEM4250)	Medicinal Chemistry (CHEM4250) had 11 students present their projects at the Fall 2023 symposium. Two students expanded their course-based projects into larger, co-curricular projects. One was funded by an OUR research grant. Both students presented their work at the spring 2024 symposium.
MLS4803/4804	MLS4803/4804 has used CRE grant support in their Research Project courses. Since becoming a CRE course in the spring 2022, these courses have supported 23 student projects. This includes posters at our spring symposium and publications in ERGO. Additionally, these courses have supported the work of outside, peer-review publications.
Applied Optics (PHYS 3190)	In Applied Optics (PHYS 3190), all students in this course gave a poster presentation in class and one student presented his work at the OUR Research Symposium. More non-physics majors signed up for our CRE PHYS 3190 Applied Optics course with two chemistry majors, a botany major, art major, and engineering major, which shows recruiting potential of CRE courses. Additionally, Utah NASA Space Grant supplied \$11,975 in funding for equipment and faculty time to plan and run the course.
PHYS 4410 Advanced Physics Lab	In the first semester (Spring 2023), students had to write a final journal article following journal editorial guidelines and all seven students presented posters in a department wide poster session attended by many faculty members and students during finals week. It provided an opportunity for our students to showcase their hard work and creativity and provided an unexpected meeting ground for faculty and students to convene over science. Six out of seven students (the last had graduated) went on to present their posters at the Spring 2023 NASA Utah Space Grant Conference at WSU in May 2023.
Exercise Science Directed Research (ESS4800)	In ESS4800, exercise science directed research, students had the opportunity to learn about working with human subjects and research ethics, while applying this knowledge to a research project. Student reflections indicate the knowledge and confidence this class has given them for moving forward with research projects in the field.
Research Methods in Economics (ECON 4980)	Funds were used to purchase secondary data to study the relationship between country-level corruption and remittances. A student found that when remittances make up a relatively large proportion of GDP, government corruption increases. Another student did a novel survey to study how influencers affect purchase behavior of young adults. The student used Prolific, an online survey platform, and distributed the survey nationally.

CRE, co-curricular initiatives

During the fall semester of 2024, OUR did initial work with the Wildcat Advantage Program to establish a process of giving students recognition for co-curricular research activities. These activities would be recognized on a student's transcript and be tracked in order to assess high impact educational experiences by our students. The Utah System of Higher Education (USHE) has mandated that students need to have at least two, in accordance with the requirement that students participate in two high impact educational experiences before graduation.

CRE Co-Curricular Attribute Application

Select the type of CRE co-curricular experience you would like to add an attribute to: *

- Writing and submitting an Undergraduate Research Grant
- Public Dissemination (Research & Engagement Symposium, UCUR, NCUR, regional or national conference, or other)
- Research Fellows Program Participant
- Completion of faculty mentored independent research project
- Art installation, presentation or performance
- Publication in ERGO or another undergraduate research journal
- Publication in academic peer reviewed journal

If you have any comments/explanations regarding your program or experience, please use the space below.

CRE Future Directions:

OUR is committed to continued support of curricular research as an inclusive, high-impact practice. The goals in this support are to:

- Recruit courses with a substantial research component to CRE designation. Academic Affairs has provided us a list of areas that do not currently have any CRE courses.
- Assist faculty in the development of CRE courses.
- Expand grant opportunities for CRE courses.
- Improve upon dissemination processes (e.g., presentation types) at the symposiums for students taking CRE courses.
- Assist faculty in the renewal of their CRE courses once their 5-year initial approval is over.
- Working with the Wildcat Advantage Program and Academic Affairs on establishing an assessment process. (More discussed in section 11).
- *In progress:* Developing a process to attach the CRE attribute to co-curricular undergraduate research experiences. This will allow tracking of high-impact educational experiences for students and recognitions on a student's transcript.

2.5 Research Fellowship Program

The primary objective is to expose students to scholarly processes early in their academic career, and thus allowing them to initiate independent research, scholarly, or creative activity during their last two academic years. OUR developed a Research Fellows' Program (formerly known as the "Scholar's Program," and currently named "Undergraduate Research Fellows Program") during the 2017-2018 academic year. During the 2016-2017 academic year, an advisory board to OUR commenced with the objective of designing the "Fellows' Program" and recruiting students. The program includes a fellowship recognition accompanied by a scholarship spread over four academic years. Funding for the Research Fellowship program is made possible using proceeds from hosting NCUR in 2012 at Weber State University. The current balance in the account will allow us to recruit Fellows for 2 more years. After that, we will need to acquire additional funds.

The purpose of the program is to provide student Fellows the opportunity to join a premier undergraduate research community and experience an education where discovery is central to their learning environment. The Fellows Program is a four-year program that moves students from having limited experience and exposure in a field to the point where they engage, discover, and create on their own under the advisement of a faculty mentor. The Fellows will acquire a deep understanding of research or creative processes, master the knowledge and skills in their selected field of study, and with the guidance of a faculty mentor, have the opportunity to produce original work. As part of this program, the Fellows are awarded a Fellowship and a research assistantship, working closely with an assigned faculty member. The Fellows will be required to disseminate their work, and where appropriate, submit their work for publication. The Fellows are awarded a fellowship with a scholarship over a 4-year academic career.

Current Annual Research Assistantship Fellowships:

Year 1: \$1000 Fellowship (\$500 per semester)
Year 2: \$1000 Fellowship (\$500 per semester)
Year 3: \$1000 Fellowship (\$500 per semester)
Year 4: \$1000 Fellowship (\$500 per semester)

Minimum Fellowship requirements:

1. Enroll in and successfully complete 15 credit hours of coursework each semester
2. Maintain a 3.0 cumulative GPA
3. Earn a C or higher in UNIV 2920 (required course during first two semesters of the first-year) entitled Research Assistant
4. A letter of reappointment from a faculty mentor: the faculty mentor will comment on the Scholar's commitment, responsibility, and motivation

During the first year, all students will enroll in UNIV 2920 entitled, Research Assistant, be a research assistant for their mentor, participate in monthly seminars to explore ways to build on their educational experiences (e.g., community-engaged learning, study abroad, research seminars, Engaged Learning Series), and participate in group activities such as parties, community service activities, or community-based research. During the first semester, we work with each of the fellows to identify a research mentor. Beginning the second semester into the second year, each Fellow is made a research assistant and assigned to work with a faculty mentor (based on their choosing). The Fellows engage in about 40 hours per semester of scholarly work with their faculty mentor. After the first two years, the Fellows are encouraged to conduct independent research and apply for research grants. Continuation in the Fellows

program is conditional on meeting the minimum criteria set forth below and recommendations of faculty mentors.

- Year 1:
The Fellows will attend two orientation seminars per semester, which may include attending a seminar as part of the Engaged Learning Series. Each Fellow will be assigned a faculty mentor who does research in an area that potentially overlaps with the student's interest. During the first year, Fellows are required to enroll UNIV 2920 entitled, Research Assistant, a general education course designed specifically for WSU Research Fellows. In this course, the Fellows will be exposed to research methodology and creative endeavors, earning the students 3 credit hours towards two general education requirements: Social Science and Humanities & Arts. UNIV 2920 will be taught by at least one faculty members who have expertise in either research methods (i.e., social sciences, etc.) or arts and humanities (e.g., creative/written arts, etc.). While taking this course, students will be expected to work closely with their assigned faculty mentors to learn about and participate in research or creative processes in their disciplines as well as interview other faculty about their research or creative processes. Students will report on their research assistant experiences and their findings from interviewing faculty. During the second semester, the Fellows will engage in directed readings with an assigned faculty mentor, and continue to be a research assistant.
- Year 2:
During the second year, the Fellows will continue to work closely with faculty mentors as research assistants designed to introduce students to specialized fields or research methods. With the aid of a faculty mentor, students will begin to explore ideas for their research or creative endeavor project and identify needs for funding the project. If appropriate, a student will apply for an undergraduate research grant to begin their research during the spring and summer semesters.
- Year 3:
Beginning in the third year, all students will undertake an individual project chosen by the student in consultation with their faculty mentor. Additionally, the Fellows will mentor first and second year Fellows, offering peer support and advice. The Fellows will identify funding needs to complete their independent work and given opportunities to apply for undergraduate research grants.
- Year 4:
In the fourth year, the Fellows will continue with their project and continue to mentor other Fellows. The Fellows will be given opportunities to disseminate their work.

The purpose of the Fellows' Program aligns with the goals of Weber State University and several divisions of the University. The mission of the University includes providing students with educational experiences through extensive personal contact among faculty, students, and staff, including outside of the classroom. The mission recognizes that academic programs and activities, including research and artistic expression, serve an important role for the University in being an educational leader in the region.

Ultimately, the Fellows' program is one avenue for enhancing the learning environment for a select group of students and providing them an undergraduate research experience across the disciplines. Its purpose aligns with the vision of OUR.

The Fellows' Program is focused on providing and engaging students in deep-learning through research, creativity, and exploration. Through this process, they will develop a unique set of skills and knowledge.

The students who are selected to participate in this program are proactive in seeking and using resources to promote their academic goals. As part of the application process (to become a Fellow), each applicant composed a *Statement of Interest in Doing Research*. In these statements the applicants demonstrated the investment they want to make for their education and academic experiences.

Scholarly exploration is challenging, and at times intimidating. Being a Fellow is a unique experience, where the Program is designed to establish collaboration and a supportive network. The Program is designed so that each student will feel like they belong to a unique program and have guidance and support along the way. The Fellows will benefit from perseverance and successful accomplishment of their research goals.

Certain undergraduate opportunities have been deemed *high impact*. According to Kuh (2008), high impact practices share several traits:

- demand considerable time and effort
- facilitate learning outside of the classroom
- require meaningful interactions with faculty and students
- encourage collaboration with diverse others
- provide frequent and substantive feedback.

Undergraduate research experiences embody these key traits.

Faculty members can enhance their teaching by engaging undergraduate students in their research. Undergraduate research provides opportunities for students to develop knowledge of a particular discipline, and in the process build confidence.

OUR hosts an annual welcome dinner for all the Fellows in the Fall. In Fall 2024, this included the Undergraduate Research Fellows, Summer Research Fellows, research mentors, and others interested in undergraduate research attended the welcome dinner. This was an opportunity for Fellows to celebrate their success and network with other Fellows and faculty mentors.

Outreach, Communication, and the Application Process

OUR maintains a website about the Fellowship Program (<https://www.weber.edu/OUR/research-fellows.html>). The website contains an overview, information about the student fellows, tips for applying, and a link to the application. In late January or early February, all admitted students to Weber State University will receive an invitation to apply to the program (see Appendix I).

In terms of outreach, in collaboration with the Wildcat Advantage Program (and the HIEEs Pay program), OUR has initiated an ambassador program. Through HIEEs Pay, we have hired a student who will accompany the Director of OUR to area high schools and speak to students about the program and scholarship.

About the Fellows: Recent Data and Experiences

During the 2023-2024 AY, we admitted 11 students to the program. Of the 11 admits, all but one has persevered. This has been a positive change, and we have adopted this model and strategies moving forward. For the current cohort 2024-2025 AY of Undergraduate Research Fellows, the following statistics were obtained: A total of seven Fellows were admitted to the program. All seven Fellows are currently enrolled in UNIV 2920, "Research Assistant I." The students in this class have participated in two faculty seminars (guest lectures) from different disciplines on campus (one from biological sciences; one from creative arts/humanities). All seven Fellows have thus far persisted in the program,

and have been assigned a research assistantship and will complete assistantship agreement forms by the end of Fall 2024 Semester.

The following recent examples illustrate the value and the importance of this program for students developing into successful Fellows. This most recent cohort that has experienced a complete academic cycle (2023-2024 AY) demonstrated some significant research progress and potential. For example: James Bustin came in “hitting the ground running.” James is interested in ornithology and took the initiative to connect with Dr. Cavitt in Zoology. James is a freshman, and during his freshman year he worked with Dr. Cavitt tagging birds and he successfully wrote a grant application and received funding for his research. Another example is Audree Clark, a musical theater major. Audree played young Jane Eyre in “Jane Eyre” during the fall semester 2023. She is working with Francesca Mintowt-Cyzz (instructor of voice and movement) on a project entitled, “Harmonious Inclusion: Exploring Accessibility in Musical Theatre for the Deaf and Blind.” Francesca received a summer research grant to pursue this research during the summer 2024.

The following figures also illustrates the composition of fellows in the program by college:

- Each of the colleges/schools have been represented in the Research Fellowship program. Early on, ART/HUM had the greatest proportion of student research fellows.
- SCIENCE has had the greatest proportion of research fellows, causing a strain on finding mentors.
- The dips we see in each year reflect turnover. On average, we admit about 10 students to the program each year, with exception to 2017, where we admitted 15 students, yet only eight graduated.
- The turnover has been addressed by the Director, Dr. Therese Cavlovic, with the new Coordinator (Fall 2023), Dr. Xin Zhao, and the OUR team, by interviewing top candidates as well as conducting more targeted recruitment of second year students via faculty mentor referrals. In the past two years, we only have one newly admitted student who has left the program and one who will not be reappointed.

Figures 9a and 9b show Fellows across time and by college.

Figure 9a: Research Fellows Across Time and College

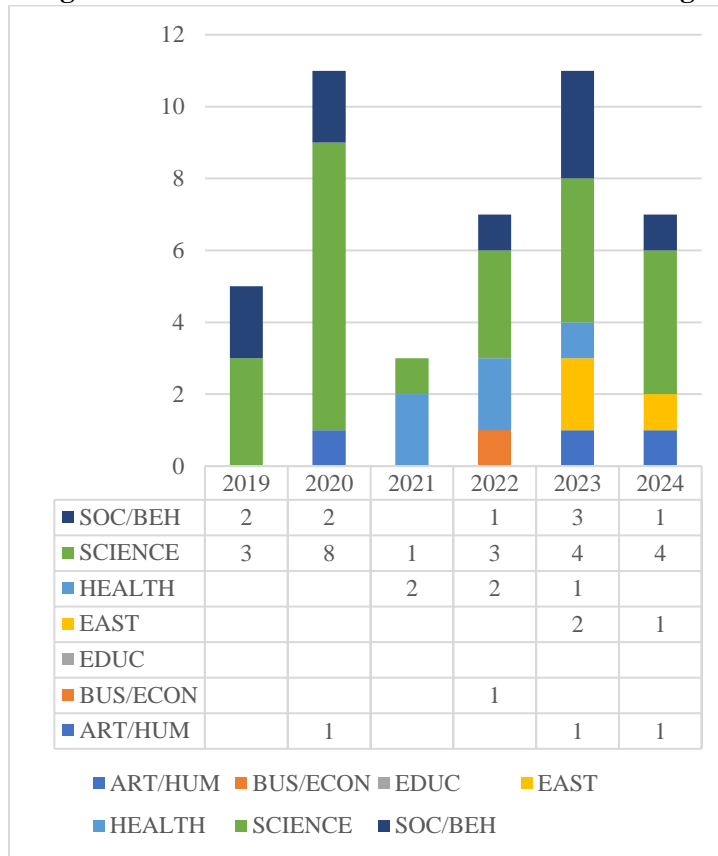
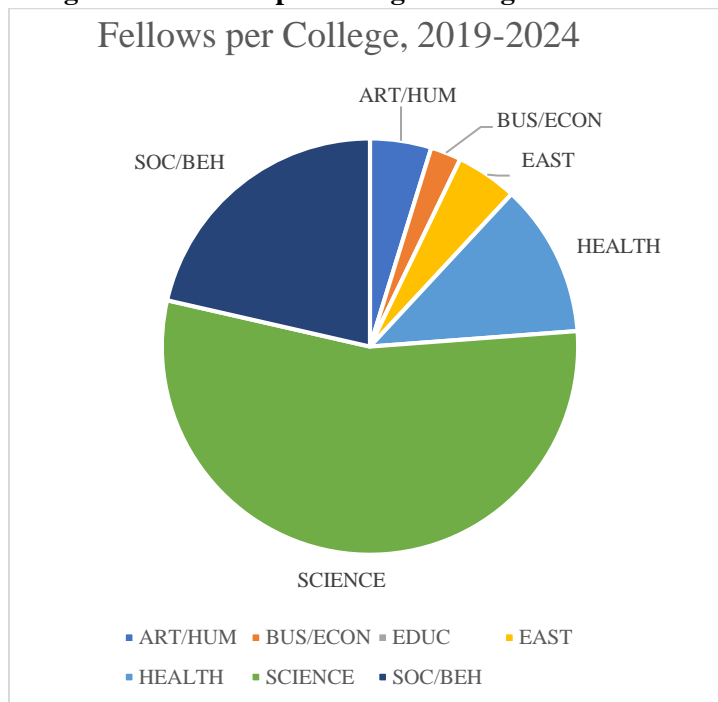


Figure 9b. Fellows per College During Review Period



Area of Concern

One significant issue of importance was addressed during the 2023-2024 academic year. The turnover in the Research Fellows Program has been an area of concern. To address this issue, we have implemented the following: (1) allow applications from first year [freshman] students who received a faculty nomination; and (2) interview all incoming and nominated candidates to ensure that students have an understanding of expectations and to assess their commitment/interest in the program. Moving forward the Director of OUR and the student ambassador will be visiting area high schools to talk about opportunities.

2.6 Summer Research Opportunity Program (SUROP)

The Summer Program was launched during the summer of 2023. It is a competitive grant program provided to faculty mentors who will conduct research with undergraduate students during the summer. Summer research can be transformative experiences for students and Weber State as a primarily undergraduate institution can offer high quality faculty-student mentorship. The resource in most limited supply for undergraduate research is time. The Summer Fellows Research Program is one of the few ways that faculty can be financially compensated for summer research with undergraduates. Information about the summer program and the application process is provided here:

<https://www.weber.edu/OUR/summer-program.html>.

Application Process: Applications are completed by faculty members who will engage in summer research with undergraduate students. They complete an online application through Qualtrics and identify the role of student researchers and their experience mentoring students. Upon acceptance, the faculty mentor will recruit students to their summer research program. The student then completes a short application, including a personal statement.

Funding: Student and faculty stipends is based on the project timeframe.

- Awards are based on 4 week, 8 week, or 12 week projects.
- Faculty stipends are \$1,000, \$2,000, or \$3,000 for 4 week, 8 week, and 12 week projects, respectively.
- Student stipends are based on an hourly wage rate multiplied by hours.
- We have received applications from all Colleges at WSU, demonstrating interest across disciplines. For the summer 2024, OUR funded 18 summer research projects, consisting of 41 students, and totaling \$103,130, down from 19 projects and \$120,120 in the summer of 2023, where SCIENCES provided approximately \$14,000 to support 2023 grants.

Notable highlights:

1. When reviewing the list of summer faculty mentors, the OUR team noticed that many new faculty mentors are getting involved (8 new faculty mentors).
2. A notable feature of the SUROP is that it developed a pre and post assessment instrument that is completed by both students and mentors. The results of the assessment are provided in Appendix E.

Figures 10a through 10e provide some detail about the number of awards, student researchers, and student stipends.

Figure 10a: Number of Summer Awards

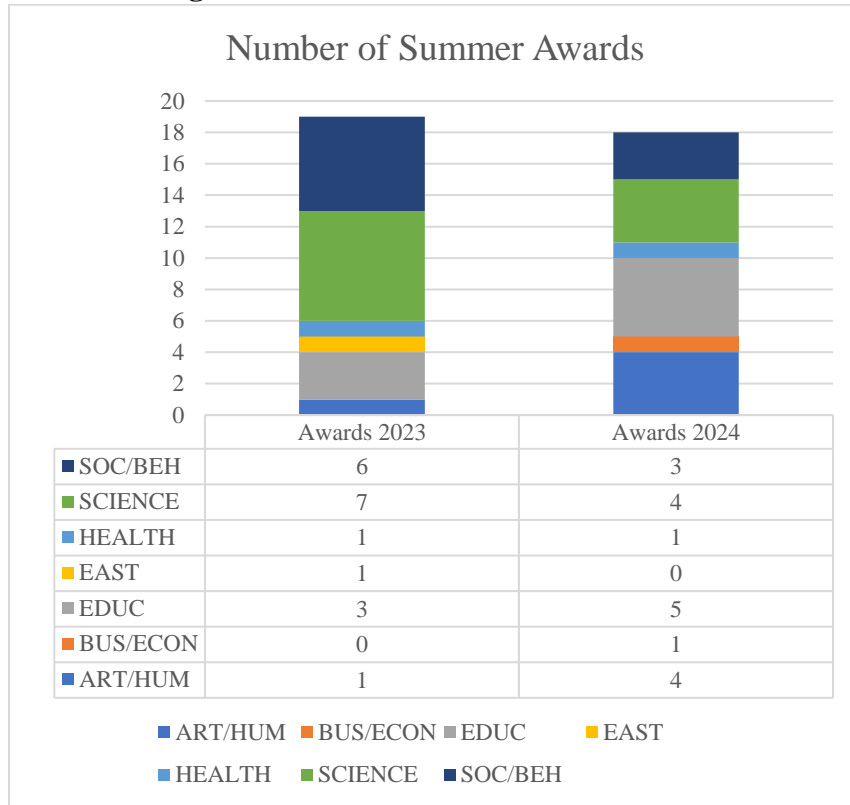


Figure 10b: Summer Award Amounts

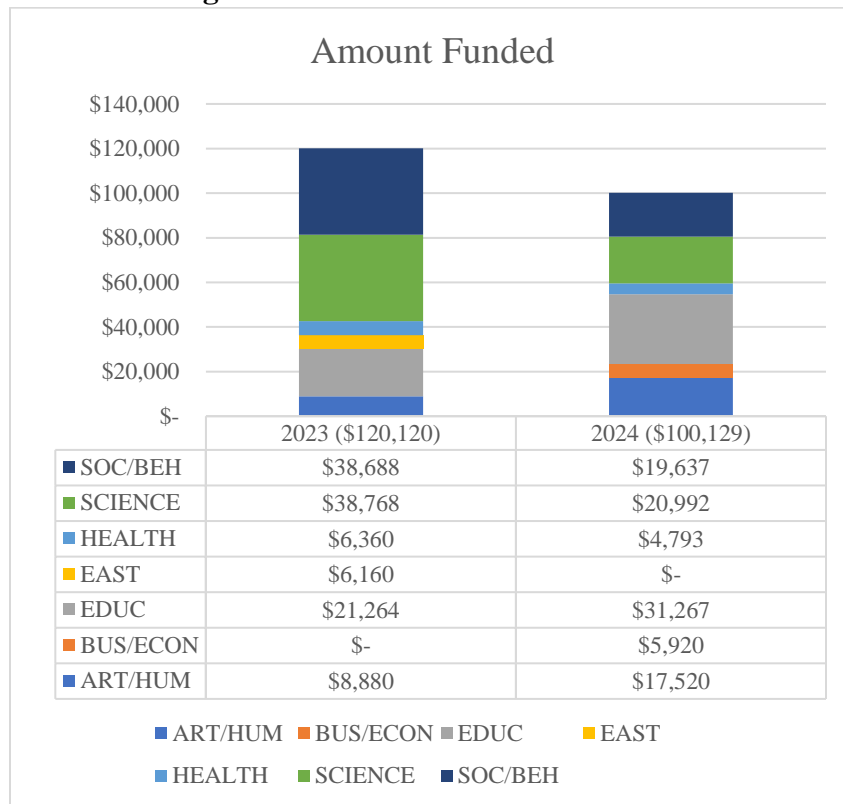


Figure 10c: Number of Student Researchers

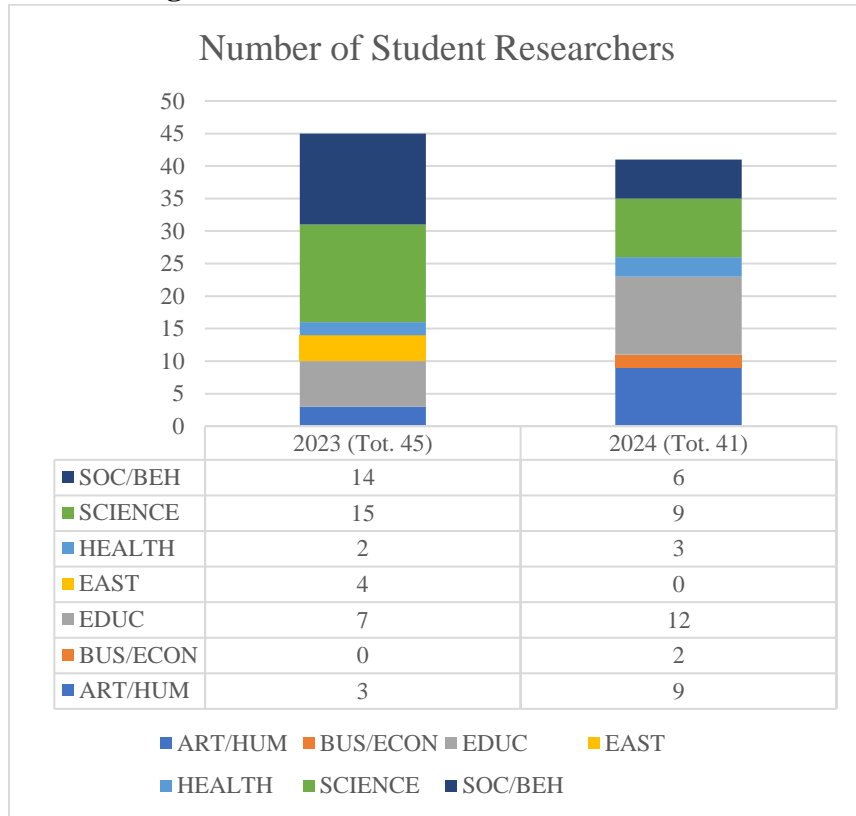


Figure 10d: Average Student Stipend

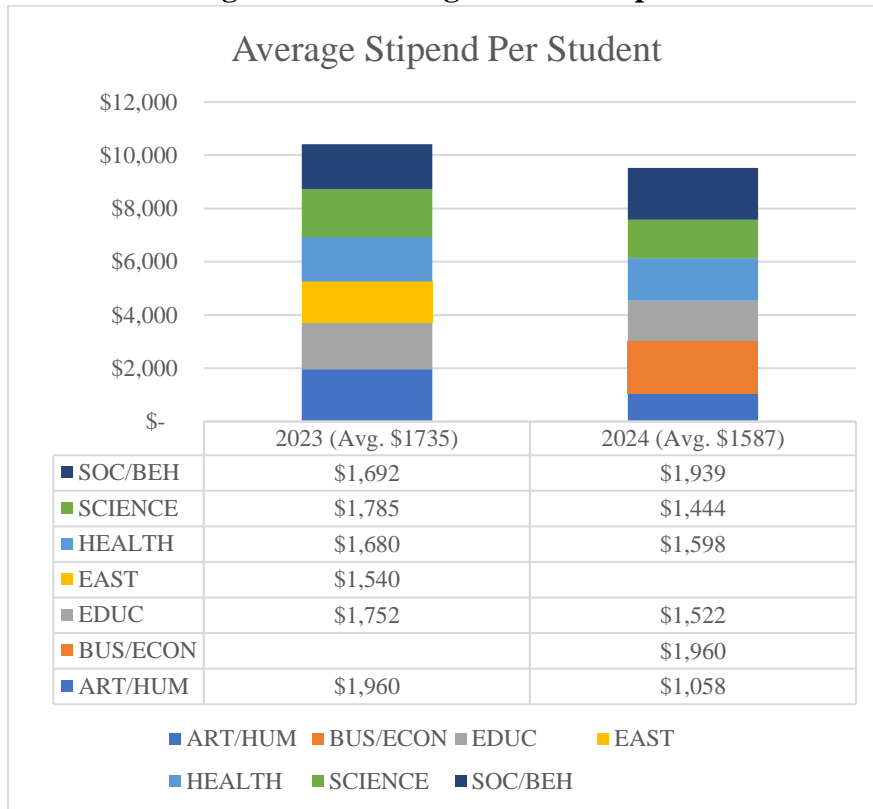
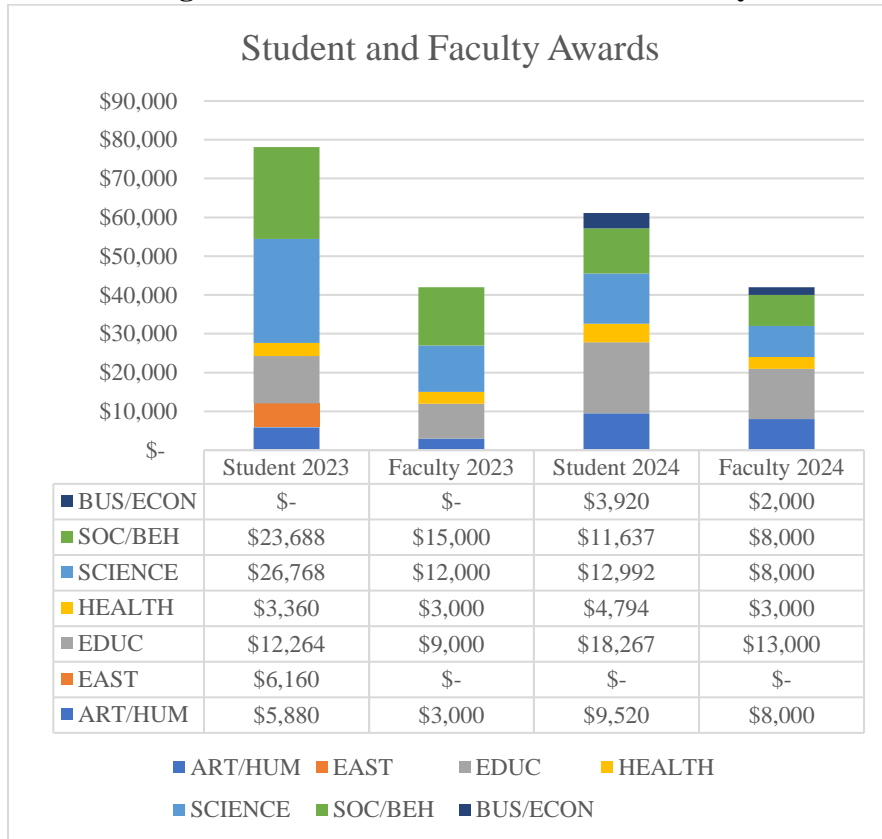


Figure 10e: Awards to Students and Faculty



Summary of the data from 2023-2024

1. Awarded Proposals

- a. We are receiving applications from most Colleges for the SUROP.
- b. The number could be based on many variables such as the size of the College, research expectations, proportion of tenured faculty, and external sources of funding.
- c. The Colleges of Science, Education, and Social and Behavioral Sciences tend to submit the most proposals.
- d. The College of Business and Economics and EAST submitted the fewest proposals.

2. Award Amounts

- a. The maximum amount that could be requested per proposal was \$9,000.
- b. The program is designed to be flexible, adjusting to the needs of each research group. Faculty base their funding requests on the approximate amount of time needed to complete their proposed project and the number of students they will include. The flexible format of the program allows for short projects with a high number of hours worked per week, as well as long programs in which students worked less each week.
- c. Amounts typically correlated with the number of awards per college, though they could vary due to the size of the research projects awarded.

3. Student Researchers

- a. Students were categorized into Colleges by major. Some students performed research with mentors from other Colleges than their own.

- b. Most students participating are from the College of Science, Education, Social and Behavioral Sciences, and Arts and Humanities.
- c. Students from the College of Health, Business and Economics, and EAST participated the least.

2.7 Summary of Involvement in OUR programs and in meeting WSU Core Themes

A breakdown of student involvement in OUR grant programs indicates that the Science, Social and Behavioral Science, Health Professions, and Engineering receive the majority of grants and the funding amounts. The average grant amount is largest in Health Professions, followed by Science. Arts and Humanities and Social and Behavioral Sciences receive the majority of travel grants. The drop in travel grants awards is due to budgeting and amount available to fund travel. Academic Affairs is providing approximately \$36,000 for student travel to disseminate.

Travel to NCUR is dominated by Science, Health Professions, and in some years Education. Travel to UCUR is dominated by Science. Post-COVID, travel to both NCUR and UCUR has declined over the years. Similarly, the symposium presentations are dominated by Science.

Adding the fall symposium for undergraduate research has provided an opportunity for more students to present their research. There were 243 undergraduate research presentations for the 2023-2024 academic year as compared to 155 for the 2022-2023 academic year, and 59 in 2022 when only a spring symposium was available. Much of this increase is due to courses being recognized as having a significant research experience and receiving a CRE (curricular research experience) attribute. Students in CRE courses are required to disseminate, and the symposium provides a venue for this. The symposium has also become a point of celebration for students.

ERGO represents another format for dissemination of undergraduate research at Weber State. In the most recent period, the majority of publications are in Health Professions. Perhaps the most noticeable change in ERGO publications is the drop-off in submissions and acceptances. It is our hope that the change in the submission process will increase the number of submissions.

Together these data suggest that the Sciences, Social and Behavioral Sciences, and Health Professions participate strongly in the many OUR program offerings. The weakest showing is from Business and Economics. Upon further examination, the majority of projects from the School of Business and Economics are in Economics (the only discipline from the Business and Economics with CRE courses—see Table 5 below).

In section 12, demographic information about the type of student participating in undergraduate research programs is presented.

Undergraduate Research Grants and WSU Core Themes

ACCESS:

Undergraduate research supports several objectives within the WSU Core Themes. The Theme of “Access” is supported through the objective of Achievement and opening doors (i.e., providing access) to future opportunities. Students participating in undergraduate research are more likely to pursue graduate education and continue pursuing research activity (Hathaway et al. 2002). In addition, undergraduate students who have engaged in undergraduate research develop critical thinking and problem-solving skills that are difficult to acquire in a traditional classroom setting but important for their success in life (Lopatto 2010).

In addition, providing travel to disseminate research at professional and academic communities, provides access to networking opportunities and meeting others doing similar research.

By offering free poster printing for students to disseminate, we offset a small financial hurdle that without aid may limit student opportunities for dissemination.

LEARNING:

The Core Theme of “Learning” is supported through the participating in mentor-guided research and learning about scholarly processes within one’s discipline. Not only do funds provided by OUR support student research but in many cases students are working on projects associated with faculty research and contributing in substantive ways to major research programs.

In addition, when undergraduate researchers attend professional and academic conferences, they are able to attend workshops and conference sessions that enhance their learning.

COMMUNITY

Undergraduate research grants are available for research teams always under the guidance of a faculty mentor. Students participate with faculty and potentially others, potentially feeling part of a research community. Further, undergraduate research projects have included projects for community partners, community leaders and members, and local not-for-profits. In the recent past, students have conducted research for the Ogden Nature Center and Cottages of Hope. However, to date, there is a paucity of research that informs the community; it seems valuable to explore ways to expand our reach through undergraduate research to the community.

3 CAMPUS OUTREACH AND COLLABORATIONS

Program and services are advertised in several different ways. A website describing all programs and activities is maintained, a yearly calendar of events is mailed to faculty at the beginning of each academic year, and advertising is also accomplished by posting activities on the campus calendar and WSU Bulletins. Special events are also advertised through campus mailings. GivePulse, a program for tracking participation and communicating activities, is used by all OUR students.

As part of Academic Affairs, OUR collaborates with other departments and entities. Each academic year the OUR Director provides a workshop for the Teaching and Learning Forum and attends their “New Faculty Retreat” to introduce new faculty to OUR programs.

Incoming students have an opportunity to select programs for which they would like additional information. Academic Affairs provides us the list of students and their emails. We follow-up with each student by sending an email and a document with information about undergraduate research opportunities. The email and document are in Appendix D.

Collaboration with all High-Impact Programs:

Undergraduate Research is a high impact program at Weber State University. In 2016, Weber State hired a Vice Provost of High Impact Educational Experiences and Faculty Excellence, International and Graduate Studies. Under the Vice Provost’s leadership, a formal process was established for identifying, assessing, and recognizing high impact educational experiences (HIEE) on campus (weber.edu/hiee/).

The Wildcat Advantage Program was established to track student participation in HIEEs. The Wildcat Advantage Program also provides incentives for student participation, including a program called HIEEs Pay. HIEEs Pay program removes barriers for students to participate in HIEEs. Under this program, students can earn up to \$1500 to participate in an HIEEs Pay experience.

The Spring Research and Engagement Symposium was extended to be an all-inclusive Research and Engagement Symposium for all students to share their HIEE experiences, projects, or research results. Prior to 2023, the symposium was for undergraduate research only.

Academic Affairs purchased GivePulse. GivePulse was initially purchased to manage and track volunteer events. The program now serves multiple purposes including:

1. Grant Management for undergraduate research and travel grants, and the submission of symposium abstracts
2. Tracking HIEE, both curricular and co-curricular. HIEEs are tracked by an attribute that is attached to either courses or co-curricular experiences. The attribute for undergraduate research is CRE, curricular/co-curricular research experiences.

Collaboration/Support for undergraduate research external to OUR

Some faculty run an independent lab and hire student research assistants. These labs are not advertised or explicitly supported by OUR. OUR is supportive of these independent labs and grateful for the opportunities afforded to students. We would like to find ways to support these efforts (e.g., communication, marketing, etc.). We would also like to be able to track these student experiences for the University.

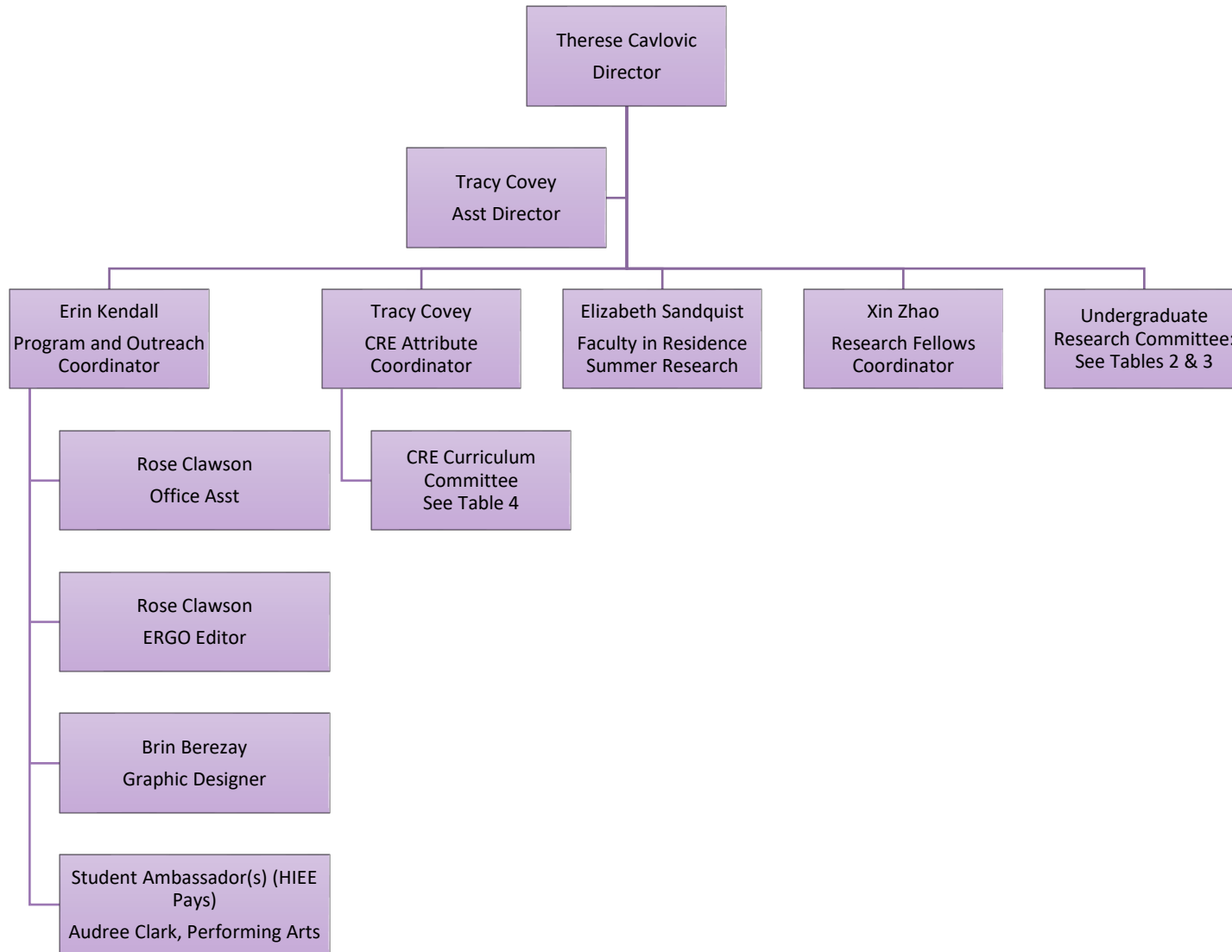
4 LEADERSHIP AND STAFFING

The OUR leadership and staffing is structured with 3 levels. OUR is led by the Director who works directly with the Office Manager, two Committee Chairs (Scholars Program and Curriculum) and one committee. The Office Manager directly oversees the work of the Office Specialist, Ergo Editor and the Graphics Designer. Detail organizational and reporting structure for professional staff and students are provided in Figure 2.

Table 4. Positions

Position	Time Requirement	Name, Dept/College
Director	0.5	Therese Cavlovic, Economics/School of Business and Economics
Asst Director	0.25	Tracy Covey, Chemistry/College of Science
Program and Outreach Coordinator	0.75	Erin Kendall
CRE Attribute Coordinator	See Asst Director above	Tracy Covey, Chemistry/College of Science
Faculty in Residence, Summer Research	0.25	Elizabeth Sandquist, Zoology/College of Science
Research Fellows Coordinator	0.25	Xin Zhao, Psychological Sciences/College of Social and Behavioral Sciences
Office Asst	0.5	Rose Clawson
ERGO editor	See office asst above	Rose Clawson
Graphic Designer	Hourly, upon demand	Brin Berezay
Student Ambassador(s)	HIEE Pays, hourly	Audree Clark, Student, Theatre

Figure 11. OUR Organizational Chart



4.1 Job Descriptions

Program and Outreach Coordinator

Job Description:

The position involves **advising, mentoring, and recruiting** for the Office of Undergraduate Research (OUR). Responsibilities include providing one-on-one advising to potential and current OUR grant students through in-person meetings, phone calls, and emails, as well as organizing group orientations to educate students about the grant process and assist with proposal writing. The role requires coordinating with WSU faculty to foster mentorship opportunities for student research and maintaining a directory of faculty mentors. Additionally, the mentor will guide grant recipients on WSU procedures related to research, purchasing project materials, and booking travel while promoting the Wildcat Advantage Program and referring students to other support services.

This role is responsible for **event planning and coordinating** special office events, which include planning, scheduling, poster printing, logistics, online registration, food arrangements, customer service, and outcomes evaluation. The position also involves co-chairing the Utah Conference on Undergraduate Research (UCUR) steering committee when it is hosted by Weber State University.

In terms of **travel coordination**, the coordinator will plan group travel for approximately 20 students attending NCUR each year, which includes providing orientations, booking flights, arranging group registrations, hotel reservations, dinner reservations, and processing student reimbursements for extra expenses. Individual travel grants are awarded throughout the year to around 60-85 separate students attending conferences; the coordinator will provide orientations, P-card training, and advise students on making individual travel arrangements.

In terms of **supervision**, this role will supervise the OUR office and train staff in grant processes, website management, and maintaining student participation records while overseeing marketing needs and editorial processes for the undergraduate research journal, Ergo, and training HIEE Ambassadors. Administrative duties involve collaboration with the Director to prepare assessment reports, co-write funding reports, and compile annual program reviews, as well as serving on committees such as the Wildcat Advantage Team and hiring committees.

The position requires full-time secretarial or clerical experience with proficiency in PC applications, strong organizational skills, the ability to manage daily office tasks, strong interpersonal skills and the maintenance of confidentiality. A bachelor's degree in English, journalism, communications, or a related field is preferred, along with experience in public relations, event planning, and writing/editing. Knowledge of university protocols, including dining services and scholarships, is essential. The candidate must be detail-oriented, possess strong writing skills, and demonstrate the ability to coordinate complex projects and communicate effectively.

Directly Responsible to

Director, Office of Undergraduate Research

Requirements:

Full-time secretarial or clerical experience with proficiency in PC applications and software is required. Must manage daily office tasks such as budget reconciliation, accounting, record management, communication, and office supply ordering. Ability to work professionally with students and faculty, adhere to university policies, and maintain confidentiality of student information is essential.

Education, Training, and Experience

Any combination of education, training, and/or experience equivalent to completion of a bachelor's degree with major coursework in English, journalism, communications or related field. Previous experience in public relations, event planning, writing or editorial work highly desirable.

Knowledge of

Experience with university areas, such as: dining services, scholarships, and financial aid, and purchasing protocols. Knowledge of website management (Site Manager)

Skill and Ability

This position requires a detail-oriented individual skilled in developing project budgets, monitoring expenditures, editing, and designing materials. Strong writing abilities in creative, technical, and factual styles are essential, along with discretion and tact in handling sensitive matters. Candidates must be able to coordinate complex projects, meet deadlines, and present effectively in public forums. Excellent interpersonal, oral, and written communication skills are needed, as well as the ability to collaborate with faculty, staff, and administration. Strong organizational and multitasking abilities are required, with preference given to those with academic setting experience. Experience in event coordination, project management, public relations, and editorial work is highly desirable.

Office Specialist

Job Description:

Individual will help maintain various aspects of the Office of Undergraduate Research (OUR); track student grant spending while ensuring that students and faculty follow university policies and procedures, maintain the OUR website. Assist students and faculty in various aspects of their student grant spending process. Other duties or tasks may be assigned on an as-needed basis.

Directly Responsible to

Program & Outreach Coordinator

Requirements:

Full-time secretarial and/or clerical experience and experience using PC applications and software required. Ability to conduct day-to-day office management which includes but is not limited to: Budget reconciliation, accounting, excellent record management, phone, and email skills, office supply ordering, etc... Ability to work with students and faculty in a professional manner and follow university procedures and policies and maintain confidentiality of student information. Proficient in the use of PC and software applications (Windows, Microsoft Word, Excel, Adobe Indesign, etc...). Excellent organizational skills, ability to multi-task; Excellent interpersonal, oral and written communication skills; ability to collaborate and establish effective working relationships with faculty, staff, and administration; ability to meet deadlines and work accurately despite interruptions. Conduct office affairs in a professional manner while working with minimal supervision. Preference will be given to individuals with experience in an academic setting.

Graphic Designer

Job Description:

The Graphic Designer will assist OUR by creating promotional material for undergraduate research initiatives. This includes brochures highlighting student and faculty funding opportunities, flyers and signage for Ergo (the undergraduate research journal), materials promoting the National Conference on Undergraduate Research, Utah Conference on Undergraduate Research, and the Fall Research and Engagement Symposium.

Directly Responsible to

Program & Outreach Coordinator

Requirements

Responsible for conceptualization and implementation of design solutions that meet OUR marketing strategies. Creation of design solutions, from concept to completion, in a wide range of graphic applications. Creates and edits high-end quality graphics, using easy and visually understandable illustrations that correspond with the written documents. Uses graphic design – Adobe Creative Suite – tools skillfully to produce efficient and accurate graphics. Analyzes and improves existing illustrations and photographs. Meets production deadlines and project schedules. Responsible for creating and maintaining exceptional quality and value in all projects.

ERGO Editor

Job Description

The Editor along with the staff is responsible for the editorial oversight of OUR's journal *ERGO*. The student editor is responsible for all aspects of the design, marketing and production of WSU's undergraduate research journal. This includes soliciting manuscripts, coordinating manuscript review, publication decisions, article editing, coordinating design and publication.

Directly Responsible to

Program & Outreach Coordinator

Requirements

Experience in writing and publication, and responsiveness and flexibility is essential. This role deals with tight production deadlines, so the editor must have excellent time management skills. The editor must be proficient in the use of PC and software applications (Windows, Microsoft Word, Excel, Adobe Indesign, etc...).

Research Fellows Coordinator, Faculty

Job Description

The Undergraduate Research Fellows Program engages a select group of top students from each discipline in a four-year program designed to introduce them to undergraduate research, scholarly or creative activities. The coordinator will develop a rigorous program to engage top students from all disciplines in undergraduate research from their freshman to senior year, oversees Undergraduate Research Fellows Program and chairs the Fellows Advisory Committee. The Coordinator will serve as advisor for program participants, seeks funding opportunities to support the Program, assist in the coordination and visioning of OUR, and participates in leadership team for OUR.

Directly Responsible to
Director, OUR

Requirements

Fulltime tenure-track faculty member with a demonstrated record in teaching and scholarship. Coordinator must have an excellent track record of mentoring students in research, scholarly or creative activities and a demonstrated ability to work with all disciplines. Experience in securing external funding both through sponsored projects and development is also required.

Summer Undergraduate Research Opportunity Program, Faculty in Residence

Job Description

The faculty member will serve as advisor for program participants, seeks funding opportunities to support the Program, assist in assessment, and the coordination and visioning of OUR, and participates in leadership team for OUR.

Directly Responsible to

Director, OUR

Requirements

Fulltime tenure-track faculty member with a demonstrated record in teaching and scholarship. Coordinator must have an excellent track record of mentoring students in research, scholarly or creative activities and a demonstrated ability to work with all disciplines. Experience in securing external funding both through sponsored projects and development is also required.

Assistant Director, Faculty

Job Description

Assists in the Director in general operations and management of core programs and in helping execute planning in adherence with the mission of the Office of Undergraduate Research. The Assistant Director provides advice on processes and events. The primary responsibility of the Assistant Director is in the management of the CRE process including organizing and reviewing CRE curriculum proposals and finalizing decisions. The Assistant Director works closely with the Wildcat Advantage Program for CRE application process in GivePulse for both curricular and co-curricular research experiences, and in designing assessment processes for CREs.

Directly Responsible to

Vice Provost, High Impact Educational Experiences & Faculty Excellence, International & Graduate Studies

Requirements

Fulltime tenure-track faculty member with a demonstrated excellence in teaching and scholarship. Must have an excellent track record of mentoring students in research, scholarly or creative activities and a demonstrated ability to work with all disciplines. Must have excellent communication skills and interact well with students, staff, faculty and administration. Excellent track record in securing external funding both through sponsored projects and development.

Decision Making

Most decisions regarding the direction of OUR are made at the director level with significant input from the Assistant Director.

Director, Faculty

Job Description

Lead administrative and general operations of OUR and its core programs. This includes working with the Development office for fundraising and donor stewardship, staff supervision, execution of communication strategies, facilitate faculty mentor training, and oversee core programs including the Research Fellowship Program, SUROP, CRE attribute processes, and travel and research grant processes. The Director serves as the university leader of, and advocate for, undergraduate research, and ensures university participation in undergraduate research initiatives at a state and national level. In consultation with the Vice Provost of High Impact Educational Experiences (in Academic Affairs), the Director develops and executes the strategic planning of undergraduate research at Weber State University.

Directly Responsible to

Vice Provost, High Impact Educational Experiences & Faculty Excellence, International & Graduate Studies

Requirements

Fulltime tenure-track faculty member with a demonstrated excellence in teaching and scholarship. Must have an excellent track record of mentoring students in research, scholarly or creative activities and a demonstrated ability to work with all disciplines. Must have excellent communication skills and interact well with students, staff, faculty and administration. Excellent track record in securing external funding both through sponsored projects and development.

Decision Making

Most decisions regarding the direction of OUR are made at the director level in consultation with Vice Provost for High Impact Educational Experiences. These decisions are also informed by discussions that occur at staff meetings and one-on-one meetings. The director, and the Vice Provost meet for an hour bi-weekly to share information, make decisions, get input on the direction of programs, and other relevant topics.

Committee Participation

The Director serves on the HIP Directors Committee, meeting monthly with the Vice Provost on High Impact Educational Experiences. The Director also served on the Academic Affairs Engagement Committee (the committee ceased in 11/2024). The Director also participates in HIEE attribute meetings and discussions. Outside of the University, the Director is part of the Utah Council on Undergraduate Research (UCUR) Steering Committee, assisting with the planning of the annual UCUR conference.

Committees

OUR has also created a series of committees to help guide the decision-making process.

Grant Committee (undergraduate research grants and SUROP awards)

Responsible for evaluating and awarding funding for student research grants and identify award recipients for the SUROP. This committee also is responsible for facilitating the selection process for outstanding student and mentor research awards awarded at the annual undergraduate research symposium. Members consist of a faculty representative from each of the seven colleges (see Table 2).

Fellows Program Advisory Committee

A committee was formed during the 2015-2016 year. The primary goal of the committee was to establish the Research Fellowship Program. The committee consisted of faculty representatives from each of the seven colleges. There is no longer an advisory committee for the program.

CRE Curriculum Committee

Responsible for developing a proposal for designating WSU courses that contain an undergraduate research emphasis and applying the CRE-attribute to these courses, which will appear on a student transcript. The committee reviews curriculum proposals and manages the process with the university curriculum office in assigning the attribute and publishing in the course catalog. The CRE coordinator works with the Director of OUR to establish a process for attaching the CRE attribute to co-curricular experiences. Tracking participation in undergraduate research experiences at either the curricular or co-curricular level is an advantage of the CRE-attribute process. Members consist of faculty representation from several colleges (see Table 4).

4.2 Training and Professional Development

All new staff are provided an orientation and training for their positions by either the director or office manager. A jobs-manual is maintained by the Office Manager that outlines duties and processes for OUR. The manual is shared with staff as appropriate for their positions. Professional development is also available and encouraged to all staff throughout the year. WSU's Workplace Learning Program offers courses and seminars that are encouraged to all staff.

4.3 Additional Staffing

The Vice Provost (High Impact Educational Experiences & Faculty Excellence, International and Graduate Studies) provides additional shared support for marketing, communication and outreach, and budgeting. The Budget Specialist tracks funds and ensures compliance with university purchasing requirements, and meets monthly with the Director and the Program and Outreach Coordinator.

5 FINANCIAL RESOURCES BUDGET AND DEVELOPMENT EFFORTS

5.1 Accounts, Description, Type and Source and Type

Table 5: Financial Accounts

Account/Index	Description, Type	Source	Primary Use
213608/120100	Education and General (E&G) Fund, OUR office budget	Academic Affairs	Education and General Fund for OUR operations
248121/185121	NCUR Conference	NCUR 2012 Revenue Account	Scholarships for Research Fellowship Program
523530/262031	Undergraduate Research, Gift	Donations	SUROP, UR grants
525314/264464	OUR Faculty Support		
529090/268247	Cross Charitable Foundation, Undergraduate Research	Earmarked Donation	UR grant for ornithology and GSL
520162/280692	Gardner K&C Undergraduate Research Endowment	~\$1 million endowment	UR grants
213327/120100	Education and General (E&G) Fund, student travel	Academic Affairs	Student travel to conferences and workshops

The primary sources of funding for OUR consists of revenue through Gifts and Donations and Academic Affairs. The office budget account (213608) including salaries and wages are covered through Academic Affairs, and office expenditures. This funding line supports all faculty and staff positions within OUR. In addition, all general expenses, advertising, publication of ERGO, symposium, NCUR student travel, and staff and faculty travel is covered through this account. An important expenditure is poster printing for the symposiums and student travel. OUR provides poster printing for any student presenting at the symposium or for conference presentations, at no charge. The large format printer was purchased in 2013, and seems to be failing. As of this writing, it is currently not working, 2 weeks prior to the Fall Symposium. [We have made arrangements with the library to print student posters for the Fall 2024 symposium.] We are investigating leasing options to replace the large format printer.

Historically, student research grants have been funded through Gifts and Donations (523530 and 529090); however, given the uncertainty of funding from gifts and donations, funding for student grants, perhaps the core program offered by OUR, is now provided by the endowment account (520162) that guarantees a minimum revenue stream each year. Funding for student travel is provided by Academic Affairs, guaranteeing a continuous source of funding for student travel to professional regional, national, and international conferences.

A break-down of the office budget for the review period is provided in Table 6.

Table 6. Financial information, beginning (BY) and ending year (EY) balances

Account	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY24/25 YTD
213608, E&G, BY	126,066.61	\$131,905.78	\$144,004.56	\$196,025.72	\$279,687.50	\$187,855.73	\$157,017.38
EY	3,126.95	44,108.48	58,004.56	82,905.61	6,235.85	7,434.15	60,797.24
213327, E&G, Travel, BY	–	–	–	35,491	27,022.72	30,136.61	34,806.00
EY				35,491	(3,207.72)	0.00	31,031.54
NCUR Conference, BY	0.00	176,620.41	161,711.31	133,968.94	110,614.15	93,078.89	67,697.05
EY	176,620.41	161,711.31	133,968.94	110,614.15	93,078.89	67,697.05	54,197.05
Gardner K&C, BY	–	–	2627.00	50,614.00	103,713.00	149,201.00	164,232.88 ^a
EY			40,544.00	81,747.00	125,724.00	152,216.88	132,422.77
Gifts, BY	175,344.46	118,630.24	88,462.16	58,723.72	135,715.49	156,058.32	64,000.50
EY	80,548.14	82,492.16	50,504.72	38,403.49	135,242.32	63,330.50	23,349.77
OUR Faculty Support, BY	36.00	6,991.68	4,911.64	4,911.64	3,911.64	3,186.64	1,584.52
EY	6,908.68	4,905.64	4,911.64	3,911.64	3,186.64	1,584.52	1,084.54
Cross Charitable, BY	1,391.82	1,391.82	1,391.82	1,391.82	1,391.82	1,391.82	–
EY	1,391.82	1,391.82	1,391.82	1,391.82	1,391.82	0.00	

^a Outstanding student awards that have not yet been paid out (within past 2 years) is \$94,326.02 (11/15/24)

5.2 Development Efforts

During the fall of 2024, OUR has worked with development in two primary ways:

1. Production of a Naming Document that will be used by the Development Office to create a professional brochure about undergraduate research opportunities for our students. The document is provided in Appendix F.
2. The creation of thank you cards (general and by discipline) for donors. Students who receive a grant write a message to their donor. The selection of cards is provided in Appendix G.

As noted previously, student grants are funded from the Gardner K&C endowment account which guarantees a minimum amount of interest revenue each year. What is often not seen in the balances of the Gardner account is outstanding grant amounts that have yet to be paid out. Students have two years to spend their grant awards.

The Gift account is currently used to support the SUROP. The NCUR account is used to provide scholarships to the Research Fellows. OUR support account provides support for faculty professional development in undergraduate research.

6 FACILITIES, EQUIPMENT, AND TECHNOLOGY

OUR is located in the Stewart Library in the heart of the Ogden Campus. The location is centrally located and provides easy access to students and faculty. The office is an open-space containing workspaces with computers for the Director, Program and Outreach Coordinator, and the Office Specialist; a sitting area; and a conference or work table area. The office holds a copy machine, a laser printer, and a large format poster printer.

The current plan is to rotate a subset of computers every four years. OUR has worked closely with the Information Technology Division to ensure that all computers meet the campus software and information security standards.

GivePulse (GP): a platform that manages participation in high-impact educational experiences (HIEE). OUR uses GP for many functions including:

1. Undergraduate grant applications
2. Symposium abstract submissions
3. Assessment surveys for SUROP and Research Fellowship Program
4. CRE curriculum and co-curriculum attribute applications, submissions, outcomes, and recognitions (e.g., co-curricular activities tracked and recorded on student transcripts).

Qualtrics Survey Software: Weber State University has a license for Qualtrics. OUR uses Qualtrics to administer a self-assessment survey to students who participate in either the fall or spring research and engagement symposiums.

7 ETHICAL AND LEGAL RESPONSIBILITIES

There are several regulations that OUR must abide to ensure safety of students, research subjects and to maintain the policies and practices of the university. All students are required to attend workshops before submitting grants and post-award funding. These workshops outline the policies and procedures of purchasing, as well as institutional requirements for IACUC (Intuitional Animal Care and Use Committee), and IRB (Institutional Review Board).

8 TRAVEL

Many of the student research grants and all of the dissemination grants require travel. Students arrange trips according to university travel policies following post-award training. Most students work with their faculty mentors and departments to arrange travel; often OUR works with students as well. Each student is required to work with their mentor on developing the travel itinerary and the mentor is required to approve the funding request following the award. All students receive the cell phone number of both the OUR Office Administrator and Director to ensure they have access to a WSU employee during their trip. In addition, students must complete the following forms with the Study Abroad Office.

Once a student receives an award, they must complete the following:

1. Notification funding and Assumption of Risk: OUR policies for student travel
2. Photo release
3. Safety Forms (completed with the Study Abroad Office)
 - a. Clery: Provides WSU contact information (filed with Weber State law enforcement). Needs to be completed for any college-related overnight travel that includes students

- b. SARA: The State Authorization Reciprocity Agreements (SARA) is a voluntary agreement between states, territories, and districts that establishes national standards for distance education programs
- c. WSU Proposal
- d. Field Trip Release: Travel and contact information, follow Weber State policies

9 TRAINING (ALL TYPES)

Faculty and Staff Training:

All staff and faculty have received training for the following:

1. Concur
2. Pcard
3. Defensive Driving (annual)
4. Sexual Harassment
5. Active Shooter training
6. Information Security Training (annual)

Student Training:

To apply for undergraduate research grants, students must complete a mandatory workshop on the application process and grant writing. This workshop is available as an online video, or students can schedule a one-on-one meeting with OUR staff for additional guidance. Students awarded research or travel grants are also required to attend a training that covers university purchasing policies, procedures, and grant obligations, such as presenting at the Fall or Spring Symposium.

10 HUMAN SUBJECT/ANIMAL CARE AND USE

All research projects involving human subjects or vertebrate animals must be reviewed by the appropriate university committee (IRB, IACUC) before any data can be collected. OUR requires that the student work closely with their faculty mentor to complete all the necessary paperwork and receive approval before funding will be released. All students complete the required training by the committees and proof of certification is submitted and placed in the student file.

During the 2024-2025, the Director requested to be included on the IRB-Human Subjects Board to help facilitate the reviews of undergraduate student IRB applications. This decision by the Weber State University IRB is pending.

To be more in line with requirements for anyone applying for federal grants, the University has set up an Institutional Biosafety Committee. The IBC has spent the last year drafting basic documents about how work with recombinant DNA is handled: <https://www.weber.edu/EHS/biohazard-safety.html>. OUR now directs students to complete a Qualtrics form on the grant application "If the work funded by this grant will use recombinant DNA or transgenic organisms, you are required to visit https://weber.co1.qualtrics.com/jfe/form/SV_0kO6s3qzHYH1ONU to register your project."

11 ASSESSMENT AND EVALUATION

Learning outcomes:

1. **Knowledge and Skills:** Students will acquire the knowledge and skills of a research process.
2. **Dissemination:** Students will be able to disseminate their project or the results of their research project to an audience wider than their research group or mentor.

Current Assessment Process

During the fall semester of 2023, the *Undergraduate Research Student Assessment* (Appendix H) instrument was distributed online via Qualtrics to all student participants of the fall or spring research and engagement symposium. This instrument is a modification from a prior pen and paper instrument distributed in 2017-2022 that was used to assess the satisfaction of engaging in undergraduate research, and learning objectives. The 2023 instrument included questions that also reflect program objectives that align with OUR values. Both instruments are self-reports by students.¹

There are also several self-assessment questions that pertain to OUR Values 1, 4, 6.

The Office of Undergraduate Research at Weber State University **Values:**

1. valuing each student's individual learning experience
2. building a community of student scholars
3. cultivating an inclusive and belonging environment for students and faculty
4. providing research and creative scholarship as a valuable engaged learning experience
5. fostering faculty-student relationships and supporting faculty mentorship of undergraduate student research and scholarship
6. providing avenues for students to learn and grow in their field of study, take ownership of their work, develop resilience and confidence, and feel proud of their accomplishments.

Learning Outcome: Knowledge and Skills, Qualtric Questions

1. Undergraduate research has helped me understand how new knowledge is generate in my discipline.
2. My undergraduate research project has presented opportunities to learn new skills.
3. I feel confidence in my ability to investigate new questions related to my project.
4. What skills did you employ to complete your project? [art exhibit, development of artistic/performing skills in music, dance, theater, or visual arts, environmental field work, laboratory work, literature review, music concert, dance performance or theater show, oral communication, pedagogical methods of analysis or comparison, poster preparation, research methods related to my field, social and behavioral human subject experiments, statistical analysis and hypothesis testing, survey research methods, written communication]

¹ The data for 2018-2022 from the 2017 instrument was not entered and analyzed under the prior Director of OUR. During the Fall of 2023, a new Director for OUR was hired.

KNOWLEDGE AND SKILLS

2023

2024

Undergraduate research has helped me understand how new knowledge is generated in my discipline.



My undergraduate research project has presented opportunities to learn new skills.



I feel confidence in my ability to investigate new questions related to my project.

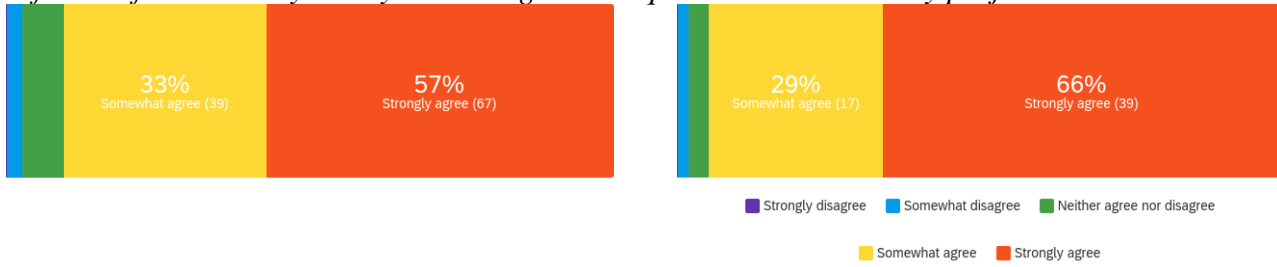


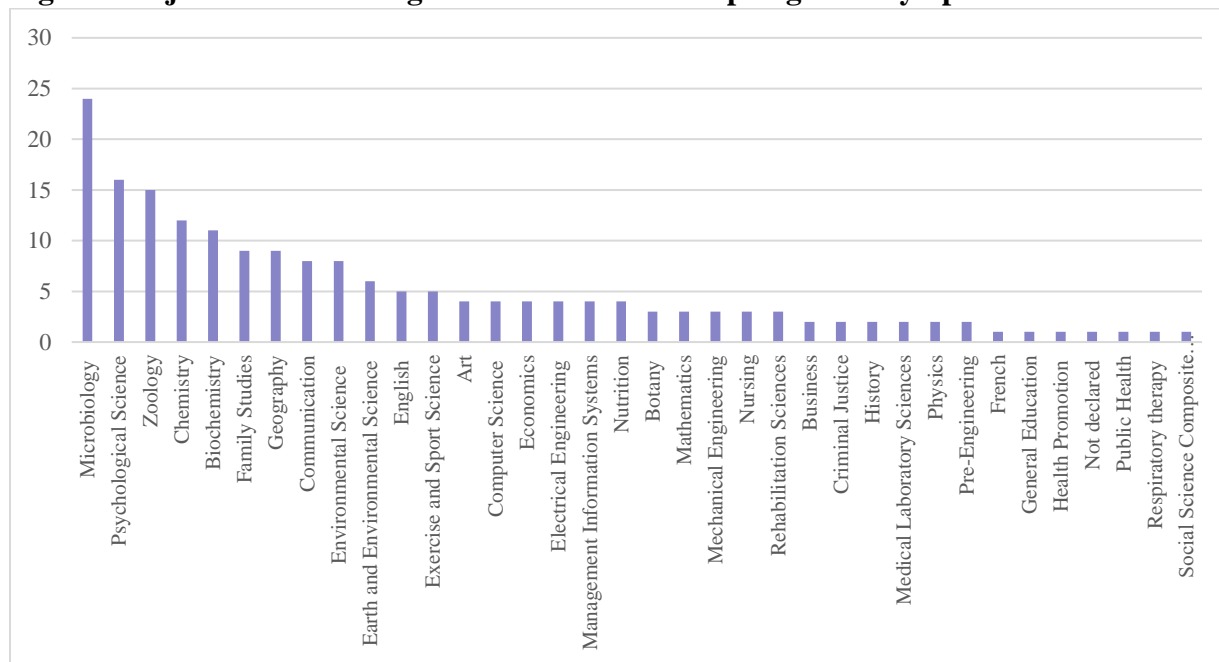
Table 7: What skills did you employ to complete your project? Please select all that apply.

Skill	2023		2024	
		Count=605		Count=389
Statistical analysis and hypothesis testing (e.g., regression analysis, t-tests, ANOVA, nonparametric analysis)	6.94%	42	10.28%	40
Research Methods related to my field	16.53%	100	16.45%	64
Laboratory work	7.93%	48	7.46%	29
Environmental field work	5.12%	31	3.34%	13
Survey research methods	5.12%	31	5.40%	21
Social and behavioral human subject experiments	2.64%	16	1.54%	6
Literature review	13.88%	84	13.88%	54
Oral communication	11.57%	70	11.83%	46
Written communication	10.74%	65	11.31%	44
Poster preparation	16.20%	98	14.56%	57
Art exhibit	0.17%	1	0.51%	2
Music Concert, Dance Performance, or Theater Show	0.17%	1	0.00%	0
Development of artistic/performing skills in music, dance, theater, or visual arts	0.50%	3	0.00%	0
Pedagogical methods analysis or comparison	2.48%	15	3.34%	13

Learning Outcome: Dissemination

In terms of dissemination, we are currently tracking presentations by discipline. In progress, is an assessment tool and rubric to assess by of the learning outcomes. This rubric is described below.

Fig. 12: Majors Disseminating at the Fall 2023 and Spring 2024 Symposiums



In progress: Assessment Strategy of Learning Outcomes

During the 2024-2025 Academic Year, in corroboration with the Vice Provost, the Office of Undergraduate Research identified the key measurable learning outcomes. These outcomes are assessed at three different levels: (1) foundation; (2) integration; and (3) transformative. The rubric is presented in Table 8. Assessment of the learning outcomes will be assessed by the faculty mentors or instructors of any student participating in a CRE for co-curricular activities, and potentially for CRE courses. The hesitation for implementing in courses is the extra burden imposed on the instructors. The goal is to establish an annual assessment process of the two learning outcomes at the three levels with threshold targets. In collaboration with the Wildcat Advantage Program, under the leadership of the Vice Provost, the assessment process is being developed within GivePulse, and thresholds being discussed.

In addition, we hope to develop a pre and post instrument that has been developed for the Summer Undergraduate Research Opportunity Program (SUROP). The SUROP initiated a pre and post assessment process in GivePulse. This assessment survey was completed by both the student and their mentor to assess learning and program outcomes. OUR hopes to extend this pre and post assessment to the Research Fellows and their mentors, and perhaps, students who receive an undergraduate research grant. We will assess its usefulness and determine if informative and not overly burdensome.

The self-study team would be interested in hearing ideas from the program review team on how to implement an assessment process that is feasible for mentors, and particular, instructors of CRE courses. It may be unrealistic for instructors to assess each individual in a CRE course.

Table 8. HIEE Learning Outcome Rubric, CRE

LEARNING OUTCOME	Definition	Foundation	Integration	Transformation
Knowledge and Skills	<i>Students will acquire the knowledge and skills of a research process.</i>	Students will show that they understand the methods of research within their respective discipline.	Students engage in research methods within their discipline. For example, students acquire and evaluate relevant scholarly work (or projects or productions), information, or data to conduct research or complete their project; by doing so, students properly formulate and situate their projects within the current state of knowledge or prior work.	Students engage in research within their discipline and are able to demonstrate a deep understanding of the contributions of their research/project, discuss limitations of their work, and discuss how their research fits with prior work.
Dissemination	<i>Students will be able to disseminate their project or the results of their research project to an audience wider than their research group or mentor.</i>	Demonstrates basic presentation skills with clear speech and effective use of visuals, with a limited scope of understanding of the research and research methods.	Presentation is engaging, well-structured, and effectively communicates key points. The student demonstrates a comprehensive understanding of the research and research methods.	Presentation is polished, persuasive, and demonstrates a deep understanding of the research and research methods. The student is able to communicate how their research fits within prior research, the limitations of their research, and areas for future research.

In addition to learning outcomes associated with undergraduate research experiences, OUR developed program outcomes that align with OUR value statements.

Program Outcomes:

- **Independence and Creativity:** Students will gain intellectual independence and creativity in designing and executing their project.
- **Sense of Belonging:** Students will gain a sense of belonging to a research and/or university community.
- **Assess Alignment with Personal and Professional Goals:** Students will critically reflect on their undergraduate research experiences to assess alignment with their personal and professional goals.

Questions that pertain to Program Outcomes include:

Program Outcome: Independent and Creativity (and Values 1 and 6)

1. I feel I have contributed meaningfully to my undergraduate research project
2. I feel confidence in my ability to investigate new questions related to my project

Program Outcome: Sense of Belonging (and Values 1, 2, 3, 4, 5)

1. Participating in undergraduate research is (has been) an important part of my college experience
2. I feel supported by my mentor
3. Doing undergraduate research has helped me meet other people in my field
4. I feel I belong in my field of study
5. I feel I have contributed meaningfully to my undergraduate research project.

Program Outcome: Assess alignment with personal and professional goals (and Values 1 and 3)

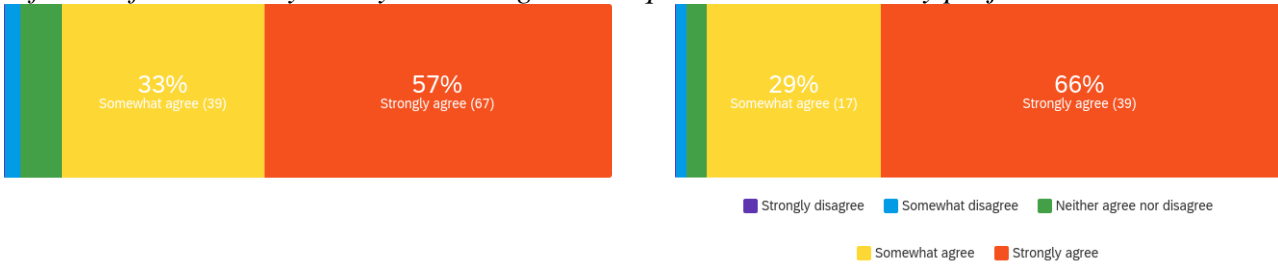
1. I have a strong interest in my undergraduate research project
2. I feel I belong in my field of study
3. Working on an undergraduate research project has helped me feel connected to my field of study

INDEPENDENCE AND CREATIVITY

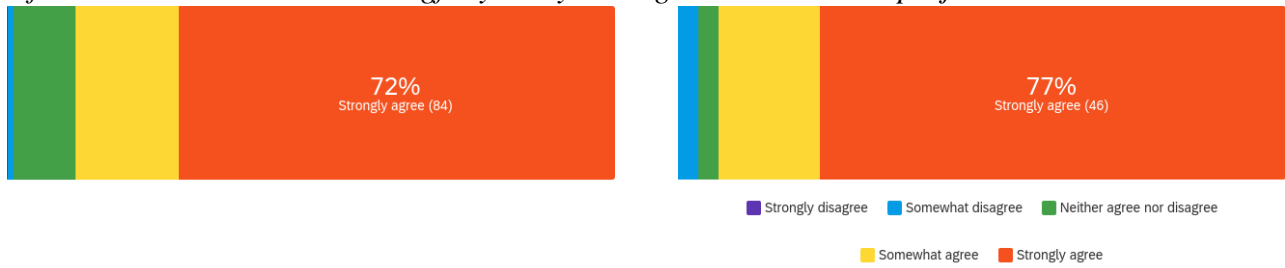
2023

2024

I feel confidence in my ability to investigate new questions related to my project.



I feel I have contributed meaningfully to my undergraduate research project.

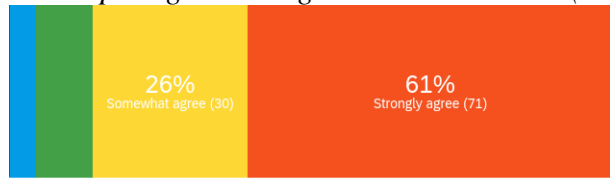


SENSE OF BELONGING

2023

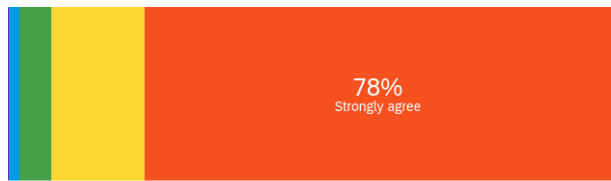
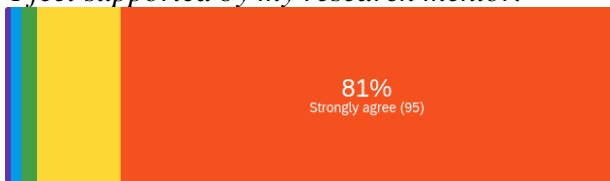
2024

Participating in undergraduate research is (has been) an important part of my college experience.



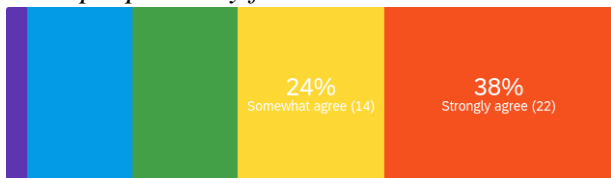
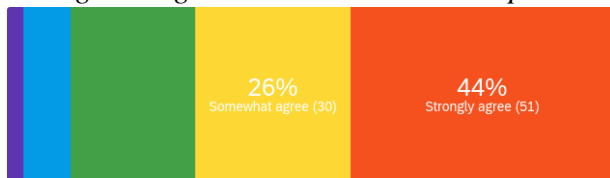
■ Strongly disagree
 ■ Somewhat disagree
 ■ Neither agree nor disagree
■ Somewhat agree
 ■ Strongly agree

I feel supported by my research mentor.



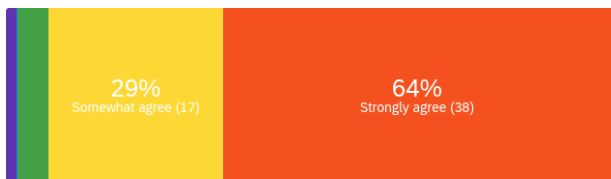
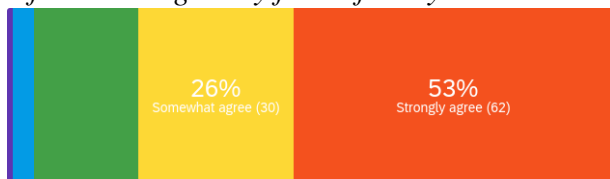
■ Strongly disagree
 ■ Somewhat disagree
 ■ Neither agree nor disagree
■ Somewhat agree
 ■ Strongly agree

Doing undergraduate research has helped me meet other people in my field.



■ Strongly disagree
 ■ Somewhat disagree
 ■ Neither agree nor disagree
■ Somewhat agree
 ■ Strongly agree

I feel I belong in my field of study.



■ Strongly disagree
 ■ Somewhat disagree
 ■ Neither agree nor disagree
■ Somewhat agree
 ■ Strongly agree

I feel I have contributed meaningfully to my undergraduate research project.



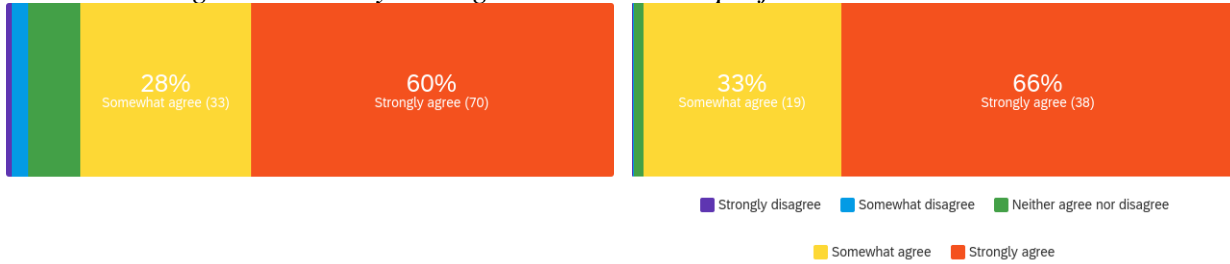
■ Strongly disagree
 ■ Somewhat disagree
 ■ Neither agree nor disagree
■ Somewhat agree
 ■ Strongly agree

ASSESS ALIGNMENT WITH PERSONAL AND PROFESSIONAL GOALS

2023

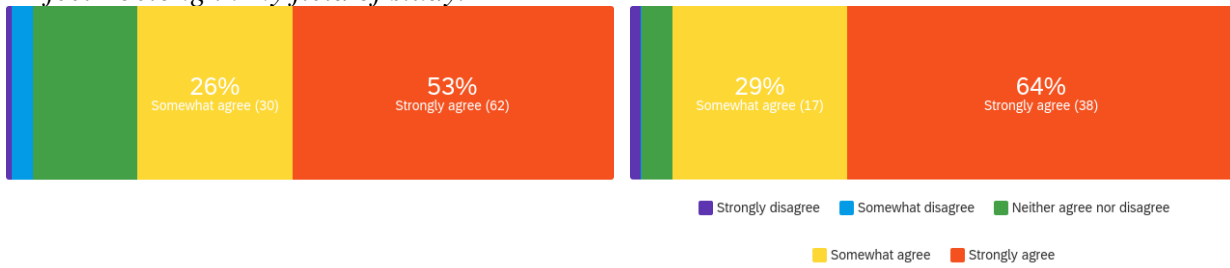
2024

I have a strong interest in my undergraduate research project.

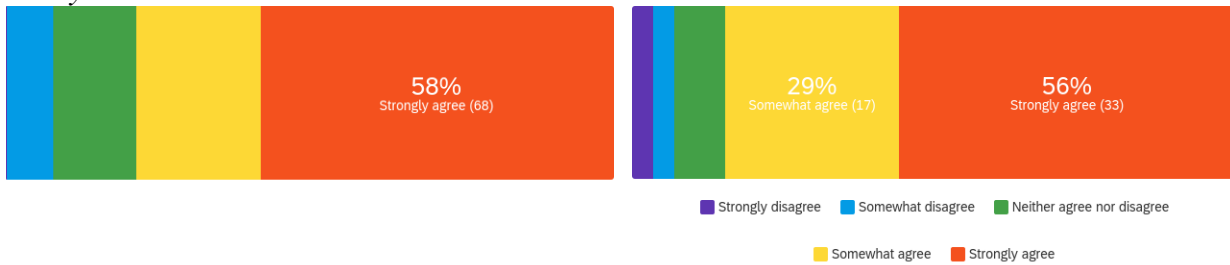


Note: Therese. When I looked at the above question by major (crosstab), there is nothing striking that stands out. Those who disagree are among various majors. No consistent story or problem to identify.

I feel I belong in my field of study.



Working on an undergraduate research project has helped me feel connected to my field of study.



11.1 Assessment Take-Aways

In general, it appears that a majority of students somewhat and strongly agree in the achievement of a specific outcome. Without a “pre” assessment instrument, it is difficult to assess the degree that the undergraduate research experience enhanced learning or achieved program outcomes.

Learning Outcomes

1. Knowledge and Skills: Self-Reports

A majority of students feel that undergraduate research provided them opportunities to learn new skills and an understanding of how new knowledge is created within their discipline. A small majority feel confidence in investigating new questions related to their project.

2. Dissemination:

We currently do not have any assessment questions in the Undergraduate Research Assessment to evaluate a student’s self-report of dissemination skills; however, students indicated that they acquired skills in oral communication and poster preparation.

Program Outcomes

1. Independence and Creativity

A small majority feel confidence to investigate new questions. This provides some indication of independence. A larger majority feel as though they contributed meaningfully to their project.

2. A Sense of Belonging

From a social perspective:

- Students indicate that undergraduate research was an important part of their college experience and felt supported by their research mentors.

From a “field” perspective:

- Students did not feel as though undergraduate research provided opportunities to meet new people within their field. It is likely that this is a relatively low percentage as networking opportunities may be limited and mostly available to students who travel to professional conferences.
- In regards to the question, “I feel I belong in my field of study,” a small majority indicated that they do; however, this should not be viewed negatively as it is hoped that through undergraduate research, students are able to assess alignment with personal and professional goals.

3. Assess Alignment with Personal and Professional Goals

A majority of students indicated that they had a strong interest in their undergraduate research project, suggesting alignment with personal goals. As indicated above, many students felt that they “belong” in their field of study. It might be worth investigating if the experience helped students assess their professional goals.

The Qualtrics survey will continue to be refined. The survey will continue to be administered to students participating in the symposium, which captures students who have and have not received funding from OUR. These data will be used to inform programs and make decisions regarding priorities for coming years. For example, if a large majority of presenters are completing research as part of a course assignment, then resources should be allocated to support this area of OUR. Currently, we only offer short-term research grants for these types of projects, and/or small CRE grants for CRE courses.

12 UNDERGRADUATE RESEARCH: STUDENTS

It has been difficult for OUR to track the proportion of students at Weber State that participate in research, scholarly and creative activities who do **not** participate in OUR programs. To date, two data sets provide information on the total WSU student participation, the Grad Survey and the National Survey of Student Engagement (NSSE). Both surveys are administered to a sample of WSU Seniors. The results of those surveys during the review period are provided in Table 9.

The Grad Survey is administered to graduating seniors. The NSSE asks students, “Work with a faculty member on a research project.” Students who responded, “Done or in progress” are represented in Table 9. According to the NSSE data, the proportion of students who have worked with a faculty member on a research project at Weber State is fairly comparable to national trends; over the three periods that NSSE was administered, average participation at Weber State is 22.33% as compared to 22.67% for the nation.

Table 9. Percentage of Senior WSU students surveyed reporting participating in an undergraduate research project. Results from the WSU Grad Survey and the National Survey of Student Engagement.

Year	Grad Survey		NSSE Weber Students	NSSE National Comparison
2019	8.50%		26%	23%
2020	14.80%			
2021	12.00%		19%	22%
2022	11.70%			
2023	13.5%		22%	23%

OUR is much better able to track and assess students who participate in OUR programs. Students participating in OUR programs (grants, symposium, ERGO, etc) seem to be a fairly close representation of the WSU student population as a whole (Table 10). Key differences are in terms of area of study, with a much larger proportion of students of science participating in research than Weber State students who declare a science major.

We are able to draw comparisons between students who engage in an UR experience to Weber State University students overall using data from the *Undergraduate Research Student Assessment*. In addition, The “Student Success Analytics” data office at Weber State created a data dashboard of our students who participated in an UR experience during the review period.

Table 10: A comparison of student characteristics with Weber State statistics

Individual Characteristic ^a	Undergraduate Research		Student Success	Weber State University	
	Student Assessment		Analytics	Fast Facts	
	2023 (n=125)	2024 (n=79)	OUR Dashboard ^b (n=575)	Fall 2024 (n~30,500)	
Female	54.40%	50%	56.99%	56.00%	
Male	38.40	43.33	40.03%	43.00	
Transgender	0	1.67		—	
Non-binary/Non-conforming	6.40	5.00		—	
Prefer not to respond	0.80	0	2.97%	—	
Unknown	—	—		<0.001%	
Black or African American	0.72%	2.87%	1.04%	1.50%	
White	79.85	75.91	73.39%	73.90	
Hispanic/Latino/Spanish Origin	4.00	8.33	11.48%	12.30	
International			2.78%	1.60	
American Indian or Alaska Native	0	2.87		0.40	
Asian	5.04	5.73	1.04%	1.80	
Native Hawaiian or other Pacific Islander	0.72	0	5.39%	0.50	
Unknown			0.20%		
Under 18 years old	0.80%	0.00%	<0.001%	Age not reported	
18 – 20 years old	16.80	20.00	19.52%		
21 – 24 years old	51.20	58.33	50.46%		
25 of older	29.60	21.67	30.02%		
				With Concurrent Enrollment Students	Excluding Concurrent Enrollment Students
Soc/Bev	17.07%	10.34%	9.32%	6.00%	11.76%
Science	43.90	39.66	33.27	4.00	7.84
Health	4.88	13.79	18.82	15.00	29.41
EAST	7.32	5.17	7.41	10.00	19.61
Educ	1.06	10.34	8.37	5.00	9.80
Bus/Econ	4.07	10.34	2.47	6.00	11.76
Art/Hum	9.76	8.62	20.34	5.00	9.80
Concurrent Enrollment	—	—		43.00	—
6-year Graduation Rate			57.67%	41.00%	
First Generation			18.78%		

^a Percentages do not add to 100% as students were able to select “prefer not to respond” options.

^b A dashboard was created by Weber State Data Team in the Office of Student Success Analytics. OUR provided student identification numbers for students who participated in an OUR program over the course of the review period. OUR requested demographics and the 6-year graduation rate.

A notable difference is in the 6-year graduation rate; students participating in undergraduate research are typically more likely to graduate within 6-years. This statistic is not indicative of whether that participating in undergraduate research improves graduation outcomes or it is simply the type of student who would normally have an improved graduate outcome that would also be more likely to participate in undergraduate research.

13 UNDERGRADUATE RESEARCH: MENTORS

A total of 179 different faculty participated in OUR activities² during the review period; of the 179, 120 faculty (67%) have been a mentor multiple times over the course of the review period. The faculty participating come from each of the seven colleges at WSU. The distribution of faculty mentors by year and college is provided in Figure 13. These data suggest that faculty from one college in particular are lagging in participation in OUR programs, Business and Economics.³ Faculty from Business and Economics represent fewer than 5% of mentored activities. There has been an uptick in mentored projects from Business and Economics over the past two academic year. It is hoped that each college will see growth as any course designated as a CRE will have students presenting at the Research and Engagement Symposium. Within any given year, the College of Science has the largest proportion of faculty participating in OUR programs.

Figure 14 shows the proportion of fulltime faculty from each college or school that mentored student research projects during the 2023-2024 academic year. A small minority of faculty from Arts and Humanities, Business and Economics, and Health Sciences mentor student research and projects; these figures are likely pretty stable across the review period, and at times much lower. Almost 28% of fulltime faculty in the College of Sciences are mentoring students, followed by Social and Behavioral Sciences at 24%.

Table 11 shows that on average, faculty mentors are working with more than one student per year.

Table 11. Average Student-to-Faculty Ratios

College	Student-to-Faculty
ART/HUM	2.43
BUS/ECON	1.56
EDUC	2.18
EAST	3.11
HEALTH	2.93
SCIENCE	3.14
SOC/BEH	2.46
Bachelor of Integrated Studies	1

It is important to note that the mentor participation figures are based on students being successful in participating in or receiving OUR funds. Faculty who are active in mentoring students will likely result in successful participation in or receiving OUR funds based on the mentor's experience and guidance.

² Based on successful participation in an OUR program (i.e., received a grant, received travel funds for NCUR, etc.)

³ Bachelor of Integrated Studies (BIS) is also lagging. There is possibly room to work with the BIS program to utilize OUR resources and programs.

Figure 13. Distribution of faculty mentoring in OUR programs

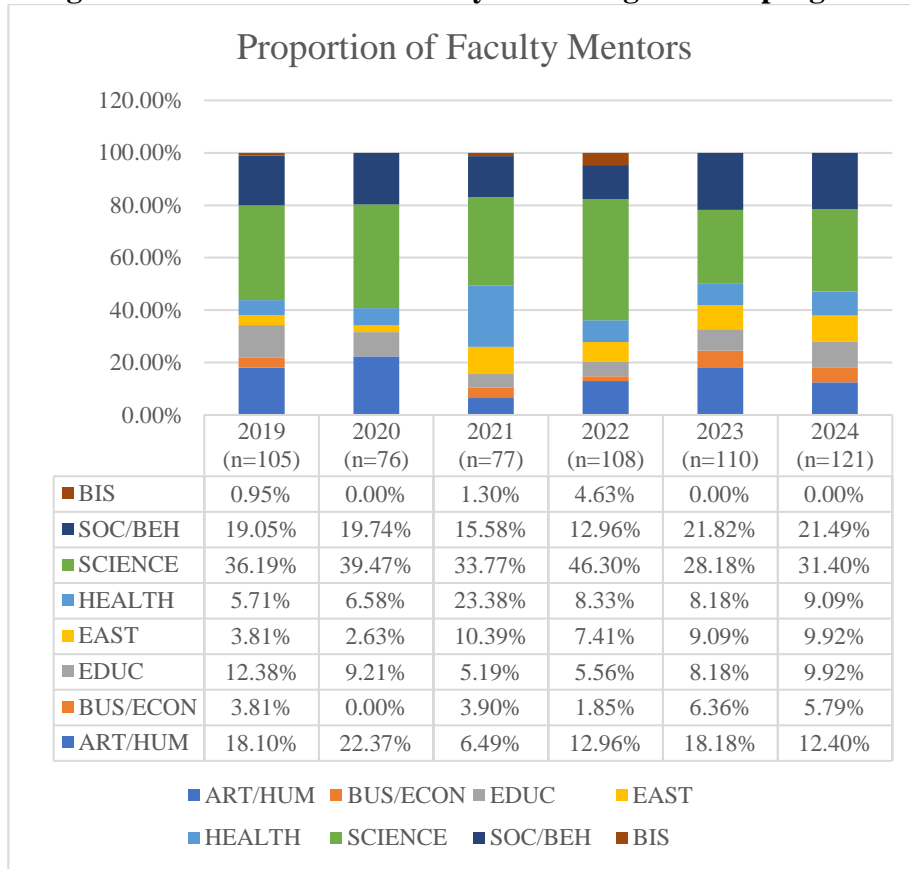
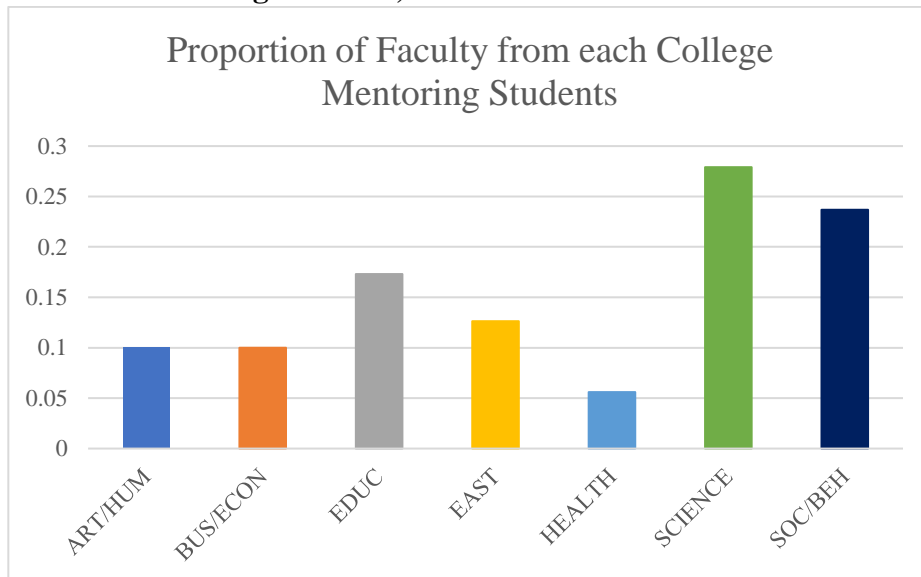


Figure 14: Proportion of Faculty within a College Mentoring Students, 2023-2024 Academic Year



In the prior Program Review, it was noted that offering workshops and resources for mentors was warranted. This fall semester, OUR initiated conversations with Weber State’s Mentoring Programs. At this time, we are still putting together materials on best practices for mentoring UR students for the Mentoring Programs office.

14 RESULTS OF PREVIOUS PROGRAM REVIEW

The prior review completed in 2017-2018 made several recommendations. The recommendations that were highlighted include:

1. **Workshops and opportunities for student development.** The OUR is often viewed by faculty and students as the office that provides funding and puts on the Symposium, and little else. There is a great opportunity for the OUR to coordinate and present a variety of workshops for students to aid in their professional development as undergraduate researchers and scholars. Topics such as getting started in research, working with your mentor, designing a poster, writing an abstract, presenting your research, etc. are standard offerings by most undergraduate research offices. Additional topics can be offered depending on student needs and strategic directions of the OUR (i.e., applying for summer research programs, applying to graduate school, presenting to a lay audience, making the most of conference attendance, team work). Workshops also will have the benefit of encouraging a peer community and bringing more students into the OUR sphere of influence.
2. **Create a faculty community and offer mentor development opportunities.** Faculty who are advocates for undergraduate research across a campus often don't know of other advocates in other departments. Fostering a monthly or once/semester gathering for interested undergraduate research mentors will encourage a faculty community, cross discipline discussions, valuable feedback for OUR, and strengthen faculty support. We heard of no efforts for faculty development as mentors. We suggest that OUR and a group of experienced faculty mentors coordinate a few opportunities for development/training each year. These could be tailored to new faculty, faculty who have students receiving funding, a targeted school or college, or an open call for participation. The sessions could be organized as a panel discussion, a luncheon speaker, or a workshop lead by an outside expert. While we do not have a recommendation on a particular delivery method or topic, we do strongly advise that attention be given to purposefully integrating mentoring into faculty professional development opportunities at WSU.
3. **Create an advisory board for OUR/undergraduate research at WSU.** While there are various committees for different programs/funding that seem to be working well, there is no overall advisory committee for OUR. We recommend forming a standing Advisory Committee that will include some overlap with the committee members, but also will strategically include influential leaders and advocates from across campus. WSU may wish to include non-faculty professionals in development, student affairs, enrollment management, advising, etc. on the Advisory Committee. External stakeholders may also prove to be beneficial to include and help drive home the message to campus leadership that employers are seeking skills that undergraduate research can develop.
4. **Celebration Day.** Thought should be put into determining how to increase participation in student numbers and in departments represented at the annual Celebration Day.
5. **Student grant program.** After a number of years of the grant funding program, OUR has built up a sizable pool of awardees to begin to detail some data in addition to disciplines/colleges represented. We suggest that OUR start tracking (and go back a few years if possible) how the funding is being used: student travel, equipment and supplies, direct student support, fees to attend workshops, etc. This information will help articulate funding needs and fundraising targets. Additionally, OUR may find out that some units/student populations are successfully getting funds for direct student support (stipends, salary), while other units have been reluctant to ask for student support. There may be inequities across student demographics or disciplines. This data may help inform OUR about any gaps in participation due to student financial need.

Currently there is no systematic tracking of student outcomes after a student receives a grant. OUR should be tasked with collecting basic information 1-3 years after funding, which would include the graduation status (including final major/gpa) of student grantees, any awards/honors resulting from conducting the research (including conference presentations and publications), other honors and awards, and post-graduation plans. Additionally, a final "summary" of the student's project/results should be required. This type of information will help OUR advocate for continued/increased funding and provide data and personal stories that illustrate the benefits of undergraduate research. This tracking can also help to build an alumni network that will benefit current students and WSU as an institution.

6. **Documenting outcomes from grant dollars.** There may be value in digging deeper into the outcomes from the grant monies allocated by the OUR to faculty and students. Much of this already exists as the monies are frequently used for travel expenses to conferences but there are opportunities to further understand some of the other outcomes.
7. **Curriculum initiatives.** We strongly recommend that you stay the course on moving towards a research-rich curriculum in as many departments/units as possible. This is the main thrust of many of the advances in UGR and this approach is particularly well suited for institutions that do not focus on summer-based research programs.

OUR has either directly addressed/implemented or is in progress of taking steps the following:

Workshops for students.

1. Progress has been made by offering poster workshops. Students can sign up to meet with the Director using a scheduler link.
2. In 2020, the grant workshop was moved online (with COVID) and has remained there. We learned that an online workshop was efficient (prior, the staff would schedule several workshops and then would receive requests to accommodate students who could not attend any of the scheduled sessions). The online workshop now includes a follow-up quiz and requests student and mentor information.
3. We provide workshops for traveling to NCUR and UCUR

Create a faculty community and offer mentor development opportunities

Beginning this year we have met with Mentoring Programs. Mentoring Programs requested information on best practices for mentoring UR students. We have provide materials to Mentoring Programs.

Create an advisory board for OUR

We created advisory boards for the Research Fellows program (in the prior review period) and CREs. Although, it seems worthwhile to develop an advisory board that would consist of students and alumni, and working professionals.

Celebration Day

A Fall Research and Engagement Symposium has been added. To date, this seems like a promising event for expanding reach.

Student grant program

In terms of recommendations, we continue to track grants by colleges and schools. Historically, an Access Database was created to track grant expenditures by type of expenditures, mentor information, number of other student participants, etc. However, this was ceased due to lack of

understanding on utilizing a database. Tracking is something to explore during the summer of 2025.

Documenting outcomes from grant dollars

Currently, the only tracking of outcomes is via dissemination. There was a process in the past where students and mentors were asked to complete a report. Students rarely completed, and sometimes the mentors would.

Curriculum initiatives

The CRE process has been established. OUR is seeing growth in CRE course offerings.

Appendices K, L and M provide the prior program review information, including the Program Review Team's report, and responses by OUR and the Vice Provost's.

15 SUMMARY

OUR provides important resources and facilitates undergraduate research throughout the entire WSU campus. Over the program review period OUR has had several significant changes:

1. Creation of Summer Research Opportunity Program
2. Implementation of CRE for curriculum and co-curricular research experiences
3. Grant offerings for CRE courses
4. Expansion of the Research Symposium to the fall semester and also the inclusion of student presentation in other high-impact programs.
5. A new grant management system (GivePulse)
6. Online Self-Assessment Process
7. Revisions to undergraduate research and travel grants
8. Revision to the Travel Grant submission process, and the ERGO submission process.

The Office of Undergraduate Research has several programs for student engagement in UR. The programs align with the University's mission and with the goal of providing an avenue for high-impact educational experiences.

There are several areas of improvement needed within OUR.

1. Evaluation of the short-term and long-term grant offerings
2. Assessment tools in addition to the self-report student assessment
3. Processes for ensuring that core programs are reflective population of WSU are utilizing them.
4. Identify challenges and needs within colleges where participation is lagging.
5. Establish Mentoring workshops or materials for best practices in mentoring students engaging in UR.
6. E&G funding for OUR seems adequate, and for student travel grants. Currently, gifts/endowment and donations are the primary sources for funding core UR programs (research grants, summer program). A priority is to develop a sustainable funding structure to ensure continuity of programs. The Director is working with Development to find a "Naming Donor" and additional endowments that provide stable funding through interest earnings. Lastly, there is only one more year of funding available for the Undergraduate Research Fellowship Program. Additional funding is needed to ensure its continuation.
7. While E&G seems adequate, things may break, such as the large format printer, or additional expenses arise, particularly with the expansion of the spring and fall symposiums. OUR prints all posters across all HIEEs (we estimate that the cost of printing a poster is about \$12/poster). OUR purchased additional poster display boards for poster printing. We currently have enough board-area to allow for 96 posters during a session (assuming 6 posters per the room divider boards that we purchased—3 on each side; if assume 4 posters per board, then there is space for 74 posters). Further, we are funding the food (e.g., primarily pizza) for the fall symposium; this is reasonable as the fall symposium is primarily dedicated to UR, but as this expands, it will need to be evaluated.

16 APPENDICES

Appendix A: Undergraduate Research Grant Application

Research Grant Application

PROCESS:

The Office of Undergraduate Research (OUR) provides research grants for students to engage in scholarly work. Students may request funds for materials, equipment, data, surveys, behavioral experiments, travel to complete research, and, for projects spanning more than one semester, a scholarship may be requested with sufficient justification. Funding is competitive. Funded research projects must be significant and challenging so that it will enhance the student's intellectual and creative development and make a contribution to the chosen field of study. All funded projects are required to disseminate at either the fall or spring Research and Engagement Symposium.

Proposals must be written by the students, not the faculty mentors.

Students may apply for short-term or long-term grants. Short-term grants cover projects spanning one semester and have a maximum of \$1000 in funding. Long-term grants cover projects spanning more than one semester and have a maximum of \$3500 in funding. Additionally, students may request a research scholarship, not exceeding \$2500, as part of a long-term grant.

REQUIREMENTS:

- I. The OUR gives a mandatory workshop on preparing a successful research proposal. All students are required to complete a workshop and take the quiz before submitting a grant proposal. Access the workshop and quiz here: <https://weber.edu/OUR/workshops.html>. Complete this step at least 14 days prior to the due date.
- II. Complete the **Research Grant Header** on the Cover Sheet; this will intentionally repeat on each page of the application. Please be aware that Grant Awards expire 2 years after the award date. Funds may not be spent after graduation.
- III. Please submit the application in the following order: (Note: Do not submit this page as part of your proposal.)
 1. Cover Sheet
 2. Signature Page: Signatures are required from the:
 - a. Student
 - b. Faculty Mentor
 - c. Undergraduate Research Committee Representative
 3. Student Information
 4. Budget Worksheet
 5. Budget Explanation
 6. Project Description
 7. Methods and Timeline
 8. Additional Student Questions
 9. Appendix A1: Supporting documentation and quotes for the budget explanation
 10. Appendix A2: Long-term grants only: Justification for scholarship request
 11. Appendix B: References using a proper style guideline (e.g., MLA, APA, etc.)
 12. Appendix C: Grant Workshop quiz results (for all student participants)
 13. Appendix D: any additional supporting materials
- IV. Check that the proposal follows all formatting instructions.

COURTESY RECOMMENDATIONS FOR OBTAINING COMMENTS AND SIGNATURES

- 14 days prior to the due date: The student should email their project mentor and the Undergraduate Research Committee (URC) Representative and inform them that they will be submitting an undergraduate research proposal. It is recommended that the student create a Google Doc and share with both individuals, as it will allow for all comments to be gathered in one document. The student should work with the mentor and URC representative to determine a schedule for reviewing and editing. The mentor will review, comment, and edit the proposal before handing it off to the URC Representative. The URC Representative will check for completion and organization.
- If there are additional changes that need to be made, it is the responsibility of the student to address the changes. The student holds sole responsibility for any mistakes or issues with their proposal. Please keep in mind, if the URC Representative is not given enough time, they may not be able to review or approve the student's proposal, which could be detrimental to the student's opportunities.
- At least 1 day prior. Complete all edits, and ensure all parts of the proposal are completed.

14 days prior	At least 1 day prior	Due date
---------------	----------------------	----------

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OUR:	\$	Estimated Project Completion Date:	

Notify URC Rep and Mentor. Coordinate a plan.	Complete all edits, and ensure all parts of the proposal are completed	Upload proposal in proper order. https://ur.weber.edu/
---	--	--

COVER SHEET

Type of Grant:	<input type="checkbox"/>	Short-term grant (one semester) (maximum request is \$1000)
	<input type="checkbox"/>	Long-term grant (more than one semester) (maximum request is \$3500)
Project Title:		
List All Student Participants Separated by Semi-Colons (Last, First):		
Faculty Mentor (Last, First):		
Faculty Mentor Email:		
Faculty Mentor Telephone:		
Select College:	<input type="checkbox"/>	Goddard School of Business and Economics
	<input type="checkbox"/>	Jerry & Vickie Moyes College of Education
	<input type="checkbox"/>	College of Science
	<input type="checkbox"/>	College of Engineering, Applied Science & Technology
	<input type="checkbox"/>	Dr. Ezekiel R. Dumke College of Health Professions
	<input type="checkbox"/>	College of Social & Behavioral Sciences
	<input type="checkbox"/>	Telitha E. Lindquist College of Arts and Humanities
Will the project require review by the WSU Institutional Review Board for Human Subjects or the WSU Animal Care and Use Committee?	<input type="checkbox"/>	NO
	<input type="checkbox"/>	YES: Human Subjects
	<input type="checkbox"/>	YES: Animal Care
Workshop Quiz Score and Completion Date (enter each student participant's score and date):		

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OUR:	\$	Estimated Project Completion Date:	

SIGNATURE PAGE

Instructions (please remove instructions before submitting):

Please place the appropriate signatures and dates on the signature line. Electronic signatures are acceptable.

Student Signature (sign above) ↑	Signature date

Project Mentor Signature (sign above) ↑	Signature date

Faculty Mentor Department Chair Signature (sign above) ↑	Signature Date

Undergraduate Research Committee Representative (sign above) ↑	Signature Date

COURTESY RECOMMENDATIONS FOR OBTAINING COMMENTS AND SIGNATURES

- 14 days prior to the due date: The student should email their project mentor and the Undergraduate Research Committee (URC) Representative and inform them that they will be submitting an undergraduate research proposal. It is recommended that the student create a Google Doc and share with both individuals, as it will allow for all comments to be gathered in one document. The student should work with the mentor and URC representative to determine a schedule for reviewing and editing. The mentor will review, comment, and edit the proposal before handing it off to the URC Representative. The URC Representative will check for completion and organization.
- If there are any additional changes that need to be made, it is the responsibility of the student to address the changes. The student holds sole responsibility for any mistakes or issues with their proposal. Please keep in mind, if the URC representative is not given enough time, they may not be able to review or approve the student's proposal, which could be detrimental to the student's opportunities.
- At least 1 day prior. Complete all edits, and ensure all parts of the proposal are completed.

14 days prior	At least 1 day prior	Due date
Notify URC Rep and Mentor. Coordinate a plan.	Complete all edits, and ensure all parts of the proposal are completed	Upload proposal in proper order. https://ur.weber.edu/

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OLR:	\$	Estimated Project Completion Date:	

STUDENT INFORMATION

Instructions (please remove instructions before submitting):

Please complete the following for all student researchers. Please duplicate this page if there are more than 4 student researchers.

W #:			
Phone:			
Weber Email:			
Total Number of Credit Hours Completed:			
Anticipated Graduation (term/year)*:			

W #:			
Phone:			
Weber Email:			
Total Number of Credit Hours Completed:			
Anticipated Graduation (term/year)*:			

W #:			
Phone:			
Weber Email:			
Total Number of Credit Hours Completed:			
Anticipated Graduation (term/year)*:			

W #:			
Phone:			
Weber Email:			
Total Number of Credit Hours Completed:			
Anticipated Graduation (term/year)*:			

*Please note that funds may not be spent after graduation.

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OUR:	\$		Estimated Project Completion Date:

BUDGET WORKSHEET

Instructions (please remove instructions before submitting): Double click on the table below and an Excel Spreadsheet will open. Enter your amounts in Excel and they will automatically enter in the table below.

Budget Item	Outside Agency Funds	Personal Funds	Department or College Funds	Undergrad Research Funds	Grand Total
Materials					\$0.00
Equipment					\$0.00
Participant Incentives					\$0.00
Survey Expenditures					\$0.00
Data Purchases					\$0.00
Mileage (\$0.38/mile)					\$0.00
Scholarship ^(g)					\$0.00
Grand Total	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

NOTES:

- a) The maximum for short-term grants is \$1000.
- b) The maximum for long-term grants is \$3500.
- c) Equipment and left-over materials purchased with this grant will remain the property of WSU.
- d) Travel: WSU reimburses travel expenses at the set mileage rate (\$0.38/mile).
- e) Grant money cannot be used retroactively on expenses that were incurred prior to the grant being awarded. All purchases must be made after receiving funding and clearance from the Office of Undergraduate Research.
- f) Funds will expire 2 years after the award date. All reallocations, funds transfers must be completed by this deadline.
- g) Faculty Mentor expenses will not be funded by the Office of Undergraduate Research.
- h) Research scholarships are only awarded for long-term grants. The research scholarship request may not exceed \$2500.
- i) No per diem requests allowed.

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OUR:	\$	Estimated Project Completion Date:	

BUDGET EXPLANATION

Instructions (please remove instructions before submitting):

- 1 single-spaced page maximum (1 inch margins, 12 point font and double-spaced between paragraphs). Please neatly organize according to the categories listed previously in the budget worksheet.
- Identify the OUR funds requested for each category listed in your budget, and describe in detail what the expenses in each category entail.
- Place all supporting documentation and quotes as Appendix A1 at the end of the application.
- Long-term grant scholarship requests must be sufficiently justified in Appendix A2.

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OUR:	\$	Estimated Project Completion Date:	

PROJECT DESCRIPTION

Instructions (please remove instructions before submitting):

- 2 single-spaced pages maximum (1 inch margins, 12 point font, and double-spaced between paragraphs).
- Include the following, in order, in the project description:
 - Project purpose or research question (1-5 sentences).
 - Project description (importance, and relevant background and literature). Students must incorporate 3 references that related to the focus of this project; college librarians are available to assist with this. Include references in Appendix B.
 - Student role and independence: Describe the student(s) role(s) and that of the faculty mentor in the project. Answer whether the project is student driven with advice being provided by the faculty mentor, or whether it is a faculty driven project with student researchers actively participating as equal collaborators in the project, etc.
- Included references in Appendix B should use proper style guidelines (e.g., MLA, APA, etc.).

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept. & College:			
Project title:			
Amount request from QUIR:	\$	Estimated Project Completion Date:	

PROJECT METHODS AND TIMELINE

Please neatly organize your methods and timeline.

Instructions (please remove instructions before submitting):

- 2 single-spaced pages maximum (1 inch margins, 12 point font, and double-spaced between paragraphs).
- If your project involves people (e.g., surveys, interviews) or protected animals, it **MUST** be reviewed and approved by the WSU Institutional Review Board (IRB) for Human Subjects or the Animal Care and Use Committee (ACUC). Include the dates when your project will be or has been reviewed and approved (your faculty mentor will help with this).
- Identify the specific steps you will follow with this project, and provide a completion date (month/year) when each step will be completed.
- Optional: Timeline charts may be provided in Appendix D for additional supporting materials.

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OUR:	\$	Estimated Project Completion Date:	

ADDITIONAL QUESTIONS

1. What funding have the student researchers received from OUR in the past? Please be specific and include dates. Respond below:
2. What additional sources of funding have been solicited? Is your department willing and able to fund any equipment that they will be retaining? Please put copies of your correspondences in Appendix D. Respond below:
3. Where do you plan to disseminate the results of this project? (All funded projects are required to disseminate at either the fall or spring Research and Engagement Symposium, along with any additional desired conferences.) Respond below:

Research Grant Header

Lead Student Name (last, first):			
Mentor (last, first) / Dept & College:			
Project title:			
Amount request from OLR:	\$	Estimated Project Completion Date:	

APPENDICES

All applications must contain the following appendices (1 inch margins, 12 point font and double-spaced between paragraphs):

1. Appendix A1: Supporting documentation and quotes for the budget explanation.
2. Appendix A2: Scholarship justification for long term grants only.
 - a. If you are requesting a scholarship with a long-term grant proposal, please justify the request for this monetary scholarship. For example, if the project requires that you reduce the number of hours that you typically work for pay, then explain.
3. Appendix B: References using a proper style guideline (MLA, APA, etc.).
4. Appendix C: Workshop Quiz Results (for each student participants)
5. Appendix D: Any additional supporting materials. Some examples include:
 - a. Sample of survey instrument or questions.
 - b. Images
 - c. Gantt Chart
 - d. Email correspondences for funding requests

Appendix B: Travel Grant Application

Travel Grant Application

PROCESS:

The Office of Undergraduate Research is pleased to provide travel grants for undergraduate and graduate students who have been accepted to present their research at regional and national conferences or attend workshops.

Please complete the application in the order that it is presented in order to be considered for a travel grant. The maximum amount of funding available to undergraduate students and graduate students is \$1000 and \$500, respectively.

Only 1 student per application. If multiple students with different projects are presenting at the same conference, each student must complete an application, and notify the Department Chair who will need to provide a complete list of all students who will be attending the conference and requesting funding.

A proposal **MUST BE submitted within 2 weeks** of receiving conference acceptance.

REQUIREMENTS:

- I. Complete the **Travel Grant Header** on the Cover Sheet; this will intentionally repeat on each page of the application.
- II. Please submit the application in the following order
 1. Cover Sheet: Please complete the cover sheet
 2. Signature Page: Signatures are required from the:
 - a. student
 - b. faculty mentor
 - c. department chair
 - d. undergraduate research committee representative
 3. Student information
 4. Budget worksheet
 5. Budget explanation
 6. Purpose of the travel grant; and Research Abstract or Workshop Outcomes
 7. Additional questions
 8. Appendix A: Acceptance letter
 9. Appendix B: A list of all students who will be attending the conference (this should be provided by the Department Chair)
 10. Appendix C: Supporting documentation and quotes for the budget explanation

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance	

COVER SHEET



Type of grant	<input type="checkbox"/>	Undergraduate student travel grant
	<input type="checkbox"/>	Graduate student travel grant
Project title:		
Conference Name		
Conference location		
Conference Dates		
Faculty mentor name & email:		
Select college:	<input type="checkbox"/>	Goddard School of Business and Economics
	<input type="checkbox"/>	Jerry & Vickie Moyes College of Education
	<input type="checkbox"/>	College of Science
	<input type="checkbox"/>	College of Engineering, Applied Science & Technology
	<input type="checkbox"/>	Dr. Ezekiel R. Dumke College of Health Professions
	<input type="checkbox"/>	College of Social & Behavioral Sciences
	<input type="checkbox"/>	Telitha E. Lindquist College of Arts and Humanities
Department:		

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance	

SIGNATURE PAGE

Instructions:

Please place the appropriate signatures and dates on the signature line. Electronic signatures are acceptable.

If multiple students are presenting at the same conference, the department chair needs to provide a complete list of all student attending. Please work with your mentor to inform the department Chair. Attach the list as Appendix B.

Student Signature (sign above) ↑	date ↑
----------------------------------	--------

Project mentor signature (sign above) ↑	mail ↑ code/phone	date ↑
---	----------------------	--------

Department Chair signature (sign above) ↑	mail ↑ code/phone	date ↑	Number of students from dept presenting at conference/workshop
---	----------------------	--------	--

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance	

STUDENT INFORMATION

Instructions:

Student: Please complete the following

+	
W #	
Phone:	
Weber Email	
Total number of credit hours completed:	
Anticipated graduation (term/year)*	
*funds may not be spent after graduation	

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance:	

BUDGET WORKSHEET

Double click on the table below and an Excel Spreadsheet will open. Enter your amounts in Excel and they will automatically enter in the table below

Budget Item	Outside Agency Funds	Personal Funds	Department or College Funds	Undergrad Research Funds	Grand Total
Conference Registration					\$0.00
Airfare					\$0.00
Mileage (\$0.38/mile)					\$0.00
Other travel					\$0.00
Accommodations					\$0.00
Grand Total					\$0.00
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

NOTES:

- a) The maximum for undergraduate travel grants is \$1000.
- b) The maximum for graduate student travel grants is \$500
- c) Travel: WSU reimburses travel expenses at a set mileage rate only.
- d) Car rentals are not supported by OUR.
- e) Student travel to present the results of the project (provide evidence that you have been accepted to present)

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance	

BUDGET EXPLANATION

Instructions:

- 1 single-spaced page maximum
- Place all supporting documentation and quotes as Appendix C at the end of the application.
- Please delete these instructions before submitting

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance	

PURPOSE AND ABSTRACT/WORKSHOP OUTCOMES

- 1 single-spaced page maximum
- Please describe the purpose of your travel grant request.
- If you are presenting research at a conference, please provide a copy of your research abstract. For undergraduate research travel grants, the abstract will be published in *ERGO*.
- If you are attending a workshop, please describe the purpose of the workshop and your goals/outcomes for attending.
- Please delete these instructions before submitting

Travel Grant Header

Student Name (last, first)	
Conference/location/date:	
Project title:	
Amount request from OUR:	
Date received conference acceptance	

APPENDICES

All applications must contain the following 3 appendices:

1. Appendix A: Acceptance letter for conference presentation or workshop attendance.
2. Appendix B: A list of all students who will be attending the conference (this should be provided by the Department Chair)
3. Appendix C: Supporting documentation and quotes for the budget explanation

Appendix C: CRE Course Grant Application

CRE Grant Application

For Undergraduate Research, Scholarly, and Creative Endeavors

PROCESS

The CRE grant application is for faculty members to apply for money to be used in their Course-based Research Experience (CRE) approved courses. You must have received the CRE attribute to be eligible for this money. The maximum request for this application is \$100/student in your class or \$2000 max. Department support is encouraged but not required at this time.

Cover Sheet

Amount Requested: _____

Project Information

Faculty Instructor (Last, First)	

Project Title (10 words or less)	

CRE course name/number and expected student enrollment	

Department	College
Do student projects in the CRE course require review by the WSU Institutional Review Board for Human Subjects or the WSU Animal Care and Use Committee?	
Yes	No

Signature Page:

Faculty signature

Date

Faculty Mentor Department Chair

Date

College Dean (if supporting the budget)

Date

CRE Grant Application

Budget Worksheet

BUDGET ITEM	Department or College Funds	Outside Agency Funds	Undergrad. Research Funds	GRAND TOTAL
Materials				
Equipment: (Mechanical, computer hardware, software, etc.)				
Incentives for human subject research				
Data purchase				
Mileage to gather Data (.38 per mile)				
GRAND TOTAL				

NOTES:

- Maximum request not to exceed \$100/student enrolled or \$2000.00 max
- Students in an OUR-supported CRE course are still eligible for additional OUR funds by submitting an individual short-term grant proposal.
- Equipment and left-over materials purchased with this grant will remain the property of WSU.
- You may not request money for gas purchases for travel. WSU reimburses travel expenses at a set mileage rate only.
- Grant money cannot be used retroactively on previously existing expenses. Requests for reimbursements will be denied. All purchases must be made after receiving funding and clearance from OUR office.

CRE Grant Application

Body of Proposal

DIRECTIONS: Please include: (1) a description of the planned project for your CRE-approved course (2) estimated budget justification and (3) the plan for student dissemination. We understand that some projects will be developed in the course. In that case, please provide an example project done in a past course and the estimated budget costs for completing a similar project. Do not exceed 1-page, single spaced. Students in CRE courses that receive OUR money are strongly encouraged to present their work at the annual OUR symposium but should disseminate beyond the scope of the CRE classroom.

Appendix D: Email to Incoming Students Who are Interested in UR

Hello,

In the orientation you completed, you indicated that you were interested in receiving information regarding Undergraduate Research. The pursuit of knowledge and creative expression are an integral part of the campus culture and Weber State University. The Office of Undergraduate Research provides support for students engaged in research, scholarly, and creative endeavors by offering Research Grants, Travel Grants, hosting the Research & Engagement Symposium, and sponsoring Course-Based Research Experience (CRE) Attribute courses.

The Office of Undergraduate Research offers funding to students working with any Weber State faculty. Typically, our students have a mentor they've already built a rapport with, or have interests in research the mentor is conducting.

We would also like to invite you to meet with our new Director, Therese Cavlovic. She will be available to introduce you to our programs and discuss your specific interests. If you would like to schedule a meeting, please go to this link: <https://calendar.app.google/9HLEefhHkFx9Utw6>

These links are a good place to start looking into what The Office of Undergraduate Research might be able to do for you:

<https://www.weber.edu/OUR/default.html>

<https://www.weber.edu/OUR/grant-overview.html>

I have also attached a copy of How to Get Involved in Research.

Please let us know if we can be of any further assistance.

Best of luck,

Rose Clawson

How to get Involved in Undergraduate Research

A Step-by-Step Guide

Research at Weber State

1. Pick a subject/area of interest. Keep in mind that research requires a lot of time and effort, so you will want to choose something that you are excited about.
 - a. Start with your major (or possibly your minor)
 - b. Think of classes you have taken (and done well in), or are currently taking, that you find interesting.
 - c. You want to start sooner than later, don't put it off! **Talk to professors just before Thanksgiving for spring semester research and just after spring break for summer/fall research.** If you wait until the beginning of the semester, it's likely that spots will be filled. **Get started on your research ASAP (sophomore/junior year), do NOT put it off.**
 - d. You can receive upper division credit for the research you do (one credit per semester), however, you also have the option of conducting research without receiving credit.
2. Pick a professor to work with. It's important to see professors as approachable, while they are professionals, they are real people as well, and many of them want to work with students. However, they won't know that you're interested (or even who you are in some cases) unless you ask questions in class, talk with them, and show genuine interest in their work (genuine interest is extremely important!! Most active faculty have personal web pages that are research related. Do your homework, know what the faculty members are doing, why their projects are important, and why the certain area interests you. "I have to do research for my med school application, so can I do it with you?" - this is NOT a genuine interest in their work and can be the fastest way to getting told no). Also don't be afraid of office hours, make yourself known!
 - a. Perform to your best ability in the professor's class. Professors want to work with trustworthy and hardworking students, show them that you are a great candidate for research.
 - b. You can obtain funding for your project through the Office of Undergraduate Research (OUR). You must be working under a professor to be considered.

Research Outside of Weber State

1. You can get paid to be a research assistant for a research/clinical trials, or as a summer research assistant at the University of Utah. Keep in mind that if you choose to do research as an employee, you will need to commit to a certain number of hours per week (just like a regular job). Here are the links to available summer programs and jobs:
 - a. <https://www.nsf.gov/crssprgm/reu/>
 - b. <http://www.bioscience.utah.edu/affiliated-research-programs/summer-undergraduate.php>
 - c. <https://www.jeanbrownresearch.com/careers/>
 - i. If you cannot find something that interests you locally, or are looking for something adventurous, summer research through the National Science Foundation may be a good option for you. They have some very unique research projects underway nationwide. Often, they will even provide housing and a stipend for students who want to get involved. You can learn more on their website: <https://www.nsf.gov/crssprgm/reu/>

Appendix E: Summer Research Program Assessment

Learning Outcomes

1. Knowledge and skills

- a. 2023 self-reflections demonstrated significant increases in project knowledge and skills from 3.8 to 4.4 out of a scale from 1- 5 (Unpaired *t*-test with Welch correction, desired FDR (Q): 1.00%, $P < 0.05$, N=35). The research mentors’ assessment of this outcome in their students also significantly improved (N=33). These, and other topics of the self-reflections are demonstrated in Fig. 1.a.

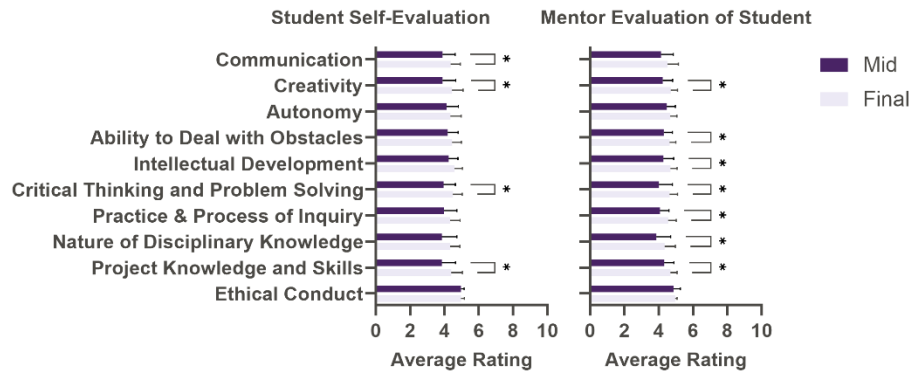


Fig 1.a) Student growth is demonstrated by self and mentor evaluations after 2023 summer research. Unpaired *t*-test with Welch correction, desired FDR (Q):1.00%, $P < 0.05$. N=35 students and 33 mentor evaluations.

- b. 2024 self-reflections showed significant gains in project knowledge and skills, from 3.8 to 4.3 (Unpaired *t*-test, $P < 0.05$, N=30). These, and other topics of the self-reflections are demonstrated in Fig. 1.b.
 - i. GivePulse was used for assessment this year. Research mentor evaluations cannot be exported for quantitative analysis, though I am investigating this for the future.

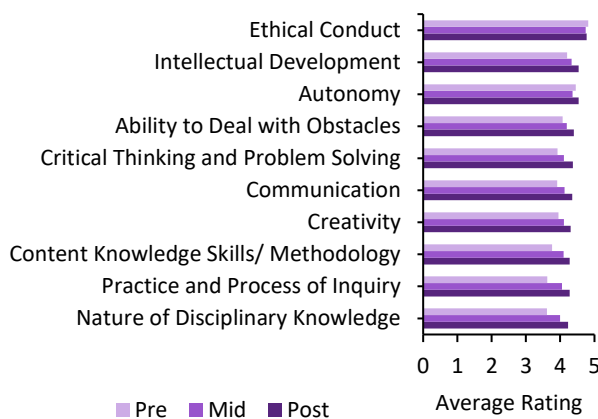


Fig 1.b.) Student growth is demonstrated by self-evaluations after 2024 summer research.

- c. *Conclusions:* Students feel they are improving their project knowledge and skills from the SUROP.
- d. *Goals:* Find easier way to remind people to complete the assessments as currently this is very time-consuming.

2. Dissemination

- a. Students participating in summer 2023 research presented their work at the Fall 2023 and Spring 2024 WSU Research and Engagement Symposium. The majority also presented at the Utah Academy of Science Arts and Letters meeting in spring of 2024.
- b. We added a question about dissemination plans to the post-research survey (dissemination of research for the 2024 SUROP has not yet completed, as the first opportunity for most students to present is not until December 2024). Half of the students indicated plans of some type to disseminate their work, while the other half did not answer the question (N=30). Two students said they had no plans to disseminate.
- c. *Conclusions:* Most students are disseminating their work locally in the format of poster presentations. Students are required to present at both the WSU Research and Engagement Symposium and the UASAL meeting due to their financial support.
- d. *Goals:* We do not have a mechanism in place to track dissemination outside of the required presentations completed within a year of the SUROP. However, much research requires years before publication. In the future, we could check in yearly with previous mentors to determine if any additional publications or forms of dissemination have been produced.

3. Belonging

- a. This outcome was not measured in 2023.
- b. Students in the 2024 cohort were whether they agreed with the statement, “I feel I belong in my field of study” at the beginning and end of the SUROP in 2024 (1= strongly disagree, 5= strongly agree. There was no significant difference between the beginning and end of the program (Paired *t*-test, $P < 0.05$, N=29). The average score prior to research was 4.5 and was 4.3 at the end of the program, indicating that students already felt a sense of belonging.
- c. Students were also asked before and after the 2024 SUROP if they agreed with the statement, “I feel connected to Weber State University.” The average score of 4.1 was unchanged after the program (Paired *t*-test, $P < 0.05$, N=29). This also indicates that students felt connected to the University prior to the SUROP.
- d. Periodic seminars could promote student outcomes, but getting students to attend will be challenging. I had to hold three separate orientation sessions (in person or over Zoom) at the beginning of the summer, and there were still students and faculty who could not attend.
- e. *Conclusions:* Students already feel a sense of belonging in their research and/or university community. They also feel connected to WSU prior to participation in the summer program. These items were each assessed with a single question, so I am unsure how much to trust these results. However, these are the exact same questions used in the exit survey for graduating students at WSU. The use of a validated assessment for belonging could demonstrate different outcomes.
- f. *Goals:* Utilize a validated assessment of belonging in the future.

4. Reflection

- a. At the beginning of the 2023 SUROP, performed students share their thoughts about research using a pre-research reflection. The majority of students had decided on a particular career goal or planned to earn advanced degrees after

graduating (72% of 46 students). We did not ask students to reflect on the impact of their experience on their career goals at the end of the program.

- b. In 2024, we added pre-post questions about career interests. The overwhelming majority of students (78% of 47 students) already had an interest in careers performing research and scholarship, or postgraduate education that recommends undergraduate research (ex. Pre-med students). Following the program, most students' career goals were unchanged (93% of 30 students), but many felt more motivated to pursue them and confident they could succeed (47% of 30 students). Two students indicated potential changes in their major or career goals.
 - c. *Conclusions:* Student have the opportunity to reflect on their experience and its impact on their career interests at the end of the summer. While we have no specifically desired outcomes, the program did not change the majority of students' career goals, but instead solidified them.
 - d. *Goals:* Add a section to the mid-summer assessment in which students could write any questions that have arisen about career options or preparation. These would be shared with their research mentor and included in future discussions with their students.
5. **General positive experience**
- a. 2023
 - i. The 2023 post-summer survey did not provide an opportunity for students to provide general comments about their experience.
 - ii. Research mentors felt that there were too many assessments throughout the summer, and had constructive suggestions to improve the format of the surveys, which were implemented the following year. Some faculty disliked the requirement to present at both the WSU Research and Engagement Symposium and the UASAL meeting. Some liked the discussion component of the surveys, though for a few it was challenging to find time to meet with students. All respondents stated that they would like to see the program continue.
 - b. 2024
 - iii. All students responding to the 2024 survey indicated that they felt their research project was relevant to your academic and career plans and could list at least one rewarding experience. Eighty percent of challenges reported by students were related to the research process, while 21% regarded scheduling with lab members (N=28). Only 6 students provided recommendations for the program when asked, and there was a lot of variety in responses.
 - iv. I did not have time to perform a survey of research mentors this year.
 - c. *Conclusions:* Students and mentors appear to have a positive experience.
 - d. *Goals:* A post-summer survey of mentors needs to be performed on a consistent basis. I plan to request volunteers from this cohort to assist in oversight of the program, which should be a source of helpful feedback.

Additional Considerations

1. Currently, research mentors select the students, so there is not an equal opportunity for all students to apply.
2. Student pay is probably not competitive

3. Ensure continued funding. How much is “enough” money? To fund all worthy applications? Explore possible funding sources with Development Office- but which one? Average length of experience for students should be tracked, as making this more uniform would assist in administration of the program.
 - b. *Conclusions:* Currently we are able to award the majority of applications meeting the award criteria. However, it is likely with increased awareness that this will not be the case in the future. Other sources or forms of compensation for research mentors is only partially known by this office, including the mbrose Shaw award, which also funds faculty research with undergraduates.
 - c. *Goals:* Improvements can be made in publicizing the program to faculty. Changes will be made to the proposal review process to make it easier to score and ensure fair awards.

Appendix F: Naming Document for Development

GOAL

The Office of Undergraduate Research (OUR) wants to establish financial stability and vitality for a number of vital undergraduate research (UR) programs. UR offer students invaluable experiences that extend beyond the classroom. By supporting such opportunities, we are making a valuable investment in the future of both our students and our broader society. UR experiences challenge and empower students to push beyond their comfort levels and delve into projects with the support of faculty members and other students. This involvement enhances their education and communication skills, and provides avenues for networking to careers and graduate study. Additionally, engaging in research with others and mentors fosters belonging and pride as students contribute to scholarly work in their fields. By supporting undergraduate research opportunities, research has shown that students learn tolerance for obstacles, gain knowledge and confidence, develop a sense of belonging to their academic community, and feel gratitude and a willingness to give back and contribute to their communities. One thing that I have personally noticed over the years, is the immense pride students feel for their accomplishments.

We continuously hear from students that their success and pride in Weber State University is mostly due to the support they received to do an undergraduate research project. We recently received a lovely message from a former student who wrote,

*“Last year I finished a seven-year mitigation project at Big Lake and Kanab Creek Watershed. It has been a wonderful, diverse project with multiple agency participation and a current *Lythrum salicaria* containment of approximately 75%. Upon reflection, I realized that its success was directly related to my undergraduate experiences at Weber State University. Particularly my research when I was completing my Botany and Microbiology Major(s). Thank you again for the years of support from the Undergraduate Research Project team. It has been a gift of perpetual motion to myself, the projects I've been fortunate to work on, and my many students.”*

[Shaunna Goldberry; sent email on 11/14/2024; She approved on 11/14/2024.]

PROBLEM

Stable and consistent funding is critical for the vitality and growth of the Office of Undergraduate Research and the opportunities for students that it provides. Core programs and opportunities that the Office of Undergraduate Research provides students include:

1. Summer Research Opportunity Program
2. Student Research Fellowship Program
3. Student Research Grants
4. Research Experiences in the Classroom
5. Student Travel to Disseminate

We are excited to share that we are in the process of naming the Office of Undergraduate Research, and it would be a great honor to have a generous donor be recognized for their support of student research engagement and experiences. This is a unique opportunity to leave a lasting legacy and to further the commitment to nurturing the next generation of researchers.

BACKGROUND SPENDING

Spending for UR opportunities listed in this document for the 2023-2024 academic year was just over \$270,000. Each year, the number of students who do not receive funding for one of the above opportunities is growing. OUR receives financial support for its programs from revenues earnings when Weber State hosted the National Conference on Undergraduate Research (NCUR) in 2012, an Endowment Fund, and from philanthropic gifts. The Provost Office supports office expenses and salaries, and student travel to disseminate at conferences.

1. **NCUR earnings** are used to provide scholarships for the Research Fellowship program. The balance from these funds is \$36,697.05, unfortunately a balance that will **NOT** allow for OUR to bring in new students beginning 25-26 academic year, as the remaining funds are committed to the current research fellows' recipients.
2. The **Gardner Endowment** is just under a \$1 million endowment, yielding approximately \$40,000 a year. These funds are used to support undergraduate research grants, and if needed, additional support for student travel and summer research. The Gardner Balance, after accounting for earmarked

amounts for UR grants awarded and 2024 summer research payments, will be approximately \$17,707, and will increase by about \$40,000 during the 24-25 academic year. Please note, however, current balance exceeds \$130,000 because students have up to two years to use their grant awards.

3. **Gifts** are used to support Summer Research Opportunities, CRE-grants, Scholarships for the Research Fellowship Program, and the celebration dinner for Research Fellows and participants from the Summer Research Opportunity Program. The Gift account balance, after accounting for 2024 summer research payments, will be approximately \$20,253 at year end of AY23-24.

Core programs that support UR experiences for students with expected annual expenses are listed below.

Table 1: Programs, Expenditures, Endowment Request, and Current Funding Sources & Levels (descriptions of each program are provided on the last page of this document)

Program	Annual Expenses	Endowment Request	Current Funding Source
1. Summer Research Opportunity Program	\$100,000	\$2.5 million	Gifts (balance going into 24-25 AY \$20,253)
2. Research Fellowship Program	\$40,000	\$1 million	NCUR Revenue earnings (funds will be exhausted by 2026)
3. Student Research Grants	\$80,000 ^a	\$1 million	Ken Gardner Endowment (annually \$40,000)
4. Research Experiences in the classroom	\$20,000 ^b	\$250,000	Provost Office (annually \$8,000)
5. Travel to disseminate	\$70,000	\$250,000 ^c	Provost Office (annually \$58,000)

^a The Ken Gardner Endowment currently supports approximately \$40,000 of this amount for undergraduate research grants.

^b The Provost Office currently supports \$8000 of this amount for curriculum-based research grants.

^c The Provost currently supports approximately \$58,000 of annual student travel to disseminate at professional/academic conferences (\$36,000) and regional and national undergraduate research conferences (\$22,000).

We are requesting a \$5 million naming endowment to provide continuous funding for the five pivotal programs listed in Table 1. Alternatively, we invite donors to consider an endowment to support any one of the impactful programs. Contributions will provide enduring support and make a transformative difference in the lives of students.

HISTORY

The Office of Undergraduate Research was formalized in 2004 and since then has become a pivotal, dynamic, and leading program for undergraduate engagement at the University. Initially focused on offering research and travel grants with a limited call for proposals each semester, OUR has grown into a dynamic program that spans all disciplines and fosters extensive campus-wide collaboration.

Thanks to the constant support from the Weber State community and generous individuals and families like yours, OUR has expanded its programs dramatically. In 2004, nearly 80 students benefited from our programs. By the 2023-2024 academic year, over 800 have been impacted by undergraduate research programs and opportunities. These students have received vital support for to conduct research, travel to conferences, publish in ERGO, an undergraduate research journal published by Weber State University, participate in an intensive summer research program, receive a research fellowship, or collaborate on an extensive research opportunity or creative project through a course. They have also been able to share their projects at the Weber State University Research and Engagement Symposium. W

Additionally, purposeful efforts have been made to extend opportunities to marginalized populations, first generation students, and adult learners, reflective of Weber State's student body. During the 2023-2024 academic year, over adult learners constituted over 50% of students who disseminated their work at Weber State University's Research and Engagement Symposium. Of the students who participated in the 2024 SUROP, 21% were 25 years old or older and 32% were first generation students.

These opportunities have empowered and opened doors for our students. One such student is Xitlalli ('Xit') Villanueva (graduated April 2023). Xit was a first-generation minority student who received a 4-year scholarship as part of the fellowship program. She did field research with professors in sociology, zoology and microbiology. These opportunities launched her into leadership roles including the vice president of Diversity and Unity of the Weber State Student Association, and on 16 September 2022 she was sworn in as the student representative on the Utah Board of Higher Education (UBHE). In January of 2023, she delivered a profound and moving presentation to the UBHE on the importance of financially supporting the education of marginalized populations. We have so many stories of students winning awards at conferences to students taking their first airplane flight. Weber State's OUR provides lifelong memories and empowering experiences for our students.

To expand on our efforts to provide opportunities for all students and remove hurdles, we are launching a student ambassador program for the 24-25 academic year. We will start with five student ambassadors who will promote UR opportunities across campus and make presentations at local high schools in Weber, Davis, and Box Elder counties.

WEBER STATE UNIVERSITY MISSION AND UNDERGRADUATE RESEARCH

Weber State University strives to provide transformative educational experiences for students through meaningful connections with faculty and staff. The mission of the Office of Undergraduate Research aligns with the overarching mission of the University. OUR's mission is to foster opportunities and a culture of scholarly work by supporting various ways for students to engage in mentored research.

Supports WSU's Strategic Plan:

How does this funding priority support Weber State's strategic plan?

As part of WSU's *Amplified* strategic plan, 50% of students are expected to have at least two high impact educational experiences before graduation. The programs offered by OUR contribute to this goal.

Research on high impact practices shows higher retention and graduation rates for all students with even higher rates of success, especially for historically underrepresented populations in higher education. Therefore, high impact educational experiences are an important retention and graduation strategy for all students, and especially for our historically underrepresented students.

Urgency Driving this Issue

What is the urgency driving this issue?

There are two urgencies driving this proposal, one external and one internal to the university. Externally, industry partners need more college graduates *now* who have applicable experiences and competencies. However, research shows that students are taking longer to complete their degrees today than in the past. Paid high impact experiences create shorter paths to graduation which helps students realize their earning potential sooner and it helps employers in our region hire employees sooner who are better prepared with skills and competencies our industry partners want and need. Over the past five years, the six year graduation rate was 57.67% for students who engaged in an undergraduate research program. On average, 40% of Weber State students graduate in six years.

Internally, WSU needs to retain more students to help them successfully graduate. Engaging in high impact educational experiences helps students do that. Students who have done undergraduate research at Weber State University are more likely to be retained and graduate within 6 years as compared to the overall student population (57.67% versus ~40%). If we can extend UR opportunities we may be able to help students gain intellectual independence, a sense of belonging to a research or the University community, and gain an understanding of their experiences and assess alignment with personal goals. If we can provide opportunities to improve retention and graduation outcomes, we help students prepare for next steps beyond WSU.

PROGRAM DESCRIPTIONS

The Office of Undergraduate Research at Weber State University fosters a campus-wide culture of undergraduate research and creative scholarship among students and faculty. Our mission is to engage students in meaningful mentored research experiences by financially supporting and coordinating scholarly activities, curriculum-based research, and travel opportunities for student dissemination.

The Office of Undergraduate Research has several key programs to provide undergraduate research opportunities to students. These programs include research and travel grants, scholarships, research stipends, and travel support to student conferences in Utah. In collaboration with the numerous high-impact programs on campus, we host a research and engagement symposium that provides an opportunity for students to showcase their accomplishments in research, engineering, and performing and visual arts.

Support during the 2023-2024 academic year:

Program	Number of Projects	Financial Support
Undergraduate Research Grants	45 (often team projects)*	\$65,458
Travel Grants	47	\$36,097
Summer Research Program (2023 and 2024)	37 (86 students)*	\$220,249
Research Fellowship Program	23	\$22,500
NCUR (CalState University)	13 students/4 faculty	\$31,914
UCUR (UVU host)	31	\$1395
Fall and Spring Research and Engagement	229 (often team projects)	~\$2000 food/stickers/swag (~\$2750 poster printing
Total student experiences	~474 students*	

* Many projects consist of multiple students. We do not have an accurate count of the number of students on team projects. Further, the total number of student experiences are not necessarily unique student numbers; meaning, a student who received grant may have also presented their research a UCUR or elsewhere.

1. Summer Research Opportunity Program (SUROP)

The SUROP was launched during the summer of 2023. Since 2023, 86 students have received research stipends to participate in summer research under the guidance of a professor. The amount awarded for summer 2023 was \$120,120 (with approximately \$12,000 of support from the College of Sciences) and including 45 students, and \$103,130 in 2024 including 41 students. The program spans many disciplines across all the colleges and schools at Weber State University. All students disseminate their work at regional or national conferences. According to their professor evaluations, students are showing improvement in creativity, ability to deal with obstacles, intellectual development, critical thinking and problem solving, practice and process of inquiry, disciplinary knowledge, and project knowledge and skills. Ninety-three percent of students who participated in the 2024 SUROP reported that they feel like they belong in their field of study and 86% reported feeling connected to Weber State University.

2. Research Fellowship Program

The Research Fellowship Program was launched in 2017 as a multiyear (4-year maximum) scholarship program. Since that time, 69 students have received a research fellowship. Similar to the SUROP, the program is spread across multiple disciplines on campus, representing each of Weber State University's seven colleges and schools. On average, each year, the Office of Undergraduate Research admits 10 new research fellows, and provides support to current fellows. On average, annually, the total scholarship is \$25,000. For 24-25 academic year the amount is \$31,000. For the past two years, the Office of undergraduate research has supplemented this amount with a \$7000 gift from the Lawrence T. Dee & Janet T. Dee Foundation. It is our goal to increase the size and impact of this program. To do so, we are launching an ambassador program where current fellows will visit local high schools.

3. Student Research Grants

Providing undergraduate research grants is the inaugural program offered by the Office of Undergraduate Research. To date, we have provided 971 research grants totaling \$1,963,318 (this includes more than 971 students as many are collaborative projects with multiple students). Since 2014, the median expenditure is \$76,883. During the 2023-2024 academic year, the Office of Undergraduate Research provided over \$65,000 towards student research. [22-23 AY 49 out of 63 grants submitted, totaling \$78,233; 23-24 45 out of 52 grants totaling \$65,459]

4. Research Experiences in the Classroom (curriculum-based research experiences, CRE)

Beginning the fall semester of 2021, students could enroll in courses with extensive research or project activities. As part of these courses, students gain hands-on experience. Evidence shows that students see growth in cognitive, personal and professional skills. Further such courses increase student retention and persistence in their respective fields. These courses are resource and time intensive, often requiring financial support for field work, equipment, and/or materials. These courses provide one of the best opportunities, bang for buck, to reach students. During the 2023-2024 academic year, 479 students were part of CRE course. As the program grows, so does the request for funding. Currently, we have been able to provide \$8000 each year towards the program. Faculty submit a grant to receive financial support to conduct the course research or project.

5. Student Travel to Disseminate

The Office of Undergraduate Research supports travel expenditures, conference registration fees, and poster printing for the following opportunities for students to disseminate publicly:

Travel	Travel, Registration 23-24 AY (22-23 AY)	Number of Students
1. Regional/National Conferences	\$36,097 (\$68,560)	47 (64)
2. National Conference on Undergraduate Research (NCUR)	\$31,914 (Long Beach) \$16,367 (Wisconsin)	13 (12)
3. Utah Conference on Undergraduate Research	\$1,395 (UVU) \$1,035 (Univ of UT)	31 (23)
4. Weber State University Research and Engagement Symposium <ul style="list-style-type: none"> • Fall 2023 • Spring 2024 	Poster Printing only	45 103

Appendix G: Thank You Card Selection for Donors, Undergraduate Research Grants

Cards created using Canva. A selection of cards for each college and general thank you cards for all occasions.



Arts & Humanities 1.5.png



Arts & Humanities 1.png



Arts & Humanities 2.5.png



Arts & Humanities 2.png



Arts & Humanities 3.png



Arts & Humanities 4.5.png



Arts & Humanities 4.png



Business & Econ 1.png



EAST 1.png



EAST 2.png



EAST 3.5.png



EAST 3.png



Education 1.png



Education 2.png



Education 3.png



Education 4.png



General 1.png



General 2.5.png



General 3.5.png



General 4.5.png



General 5.5.png



General 5.png



General 6.png



General 7.png



General 8.png



General 9.png



General 10.png



Health Prof 1.png



Health Prof 2.png



Health Prof 3.png



S&B 1.5.png



S&B 1.png



S&B 2.png



S&B 3.5.png



S&B 3.png



S&B 4.png



Science 1.png



Science 2.png



Science 3.png



Science 4.png



Science 5.png



Science 6.png



Science 7.png



Science 8.png



x Grant Donor Card.png

Appendix H: CRE application for courses

HIEE Attribute Application

This is your one stop High Impact Education Experience application.

Instructor/Submitter First Name *

Therese

Instructor/Submitter Last Name *

Cavlovic

Instructor/Submitter Email *

tcavlovic@weber.edu

This attribute is for a *

Course (curricular)

Program (co-curricular)

<<

>>

5. The other pages are not copying well. Below is a list of the questions
6. Choose your college
7. Department
8. Course Title
9. Course Subject Prefix
10. Course Number
11. Credit Hours
12. Is this course graded or ungraded?
13. Is this a general education course?
14. Is the attribute for [individual instructor; all sections of a course]?
15. Attachment upload for department approval
16. Is this a new application for an attribute?
17. Upload course syllabus
18. Beginning academic year
19. Beginning semester
20. Select all semesters that the course will be taught
21. Select attribute type (applicant would select CRE)

22. Please explain how the CRE is tied to your existing course or section
23. How will the research project (paper, data collections, performance, etc.) be disseminated
24. Does your CRE represent at least 25% of the total grade?
25. If you changed the wording of the CRE learning outcomes, please include your version.
26. What are the discipline specific learning outcomes that relates to the research component?
27. Please include the ways students will collaboratively work with the instructor
28. If you have any other comments/explanation regarding your class please use the space below

Appendix I: Research Fellows Application

Note: Application will open in February. All accepted students will get an invitation to apply.



Application Process

Application Deadline

Applications will be accepted until June 1. Interviews will be conducted in June, and decision letters will be sent out in early July.

Application Details

- Areas interested in studying
- Statement of Interest (400 word maximum)
- A summary of research experience or a project completed
- Awards and Honors received
- Optional: List of participation in school, district, or regional science fairs.
- The names and emails of two references who will be asked to provide a letter of recommendation on your behalf. At least one reference should be able to comment on your academic abilities.

[Apply for Undergraduate Research Fellows Program](#)

Appendix J: Undergraduate Research Assessment Survey (Qualtrics)

Undergraduate Research Assessment Survey

Start of Block: Instructions

Q0 This assessment survey is conducted by Weber State University's Office of Undergraduate Research. Please submit feedback regarding your experience with undergraduate research. All responses are anonymous and confidential.

End of Block: Instructions

Start of Block: Demographics

Q1 What is your gender?

- Male (1)
- Female (2)
- Transgender (3)
- Non-binary/Non-conforming (4)
- Prefer not to Respond (5)

Q2 Are you Hispanic, Latino, or Spanish Origin?

- Yes (1)
- No (2)
- Prefer not to Respond (3)

Q3 How would you describe yourself? Please select all that apply.

- American Indian or Alaska Native (1)
- Asian (2)
- Black or African American (3)
- Native Hawaiian or other Pacific Islander (4)
- White (5)
- Prefer not to Respond (6)

Q4 What is your age range?

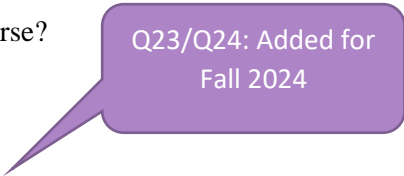
- Under 18 (1)
- 18 - 20 (2)
- 21-24 (3)
- 25 or older (4)
- Prefer not to Respond (5)

Q5 What is your major?

Page Break

Q23 Was your research project part of a course?

- YES (1)
- NO (2)



Q23/Q24: Added for
Fall 2024

Display This Question:

If Was your research project part of a course? = YES

Q24 If your project was part of a course, please type the course number. Please include course attributes (if applicable, SUS, CRE, DIV, etc.), prefix, and number. For example, CRE CHEM 4250, CHEM 1010, SUS ECON 1100.

End of Block: Demographics

Start of Block: Undergraduate Assessment

Q16 Participating in undergraduate research is (has been) an important part of my college experience.

	Strongly disagree (12)	Somewhat disagree (13)	Neither agree nor disagree (14)	Somewhat agree (15)	Strongly agree (16)
Click to indicate response (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 My undergraduate research project has presented opportunities to learn new skills.

	Strongly disagree (12)	Somewhat disagree (13)	Neither agree nor disagree (14)	Somewhat agree (15)	Strongly agree (16)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 I feel supported by my research mentor.

	Strongly disagree (32)	Somewhat disagree (33)	Neither agree nor disagree (34)	Somewhat agree (35)	Strongly agree (36)
Click to indicate response (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Doing undergraduate research has helped me meet other people in my field.

	Strongly disagree (12)	Somewhat disagree (13)	Neither agree nor disagree (14)	Somewhat agree (15)	Strongly agree (16)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 I have a strong interest in my undergraduate research project.

	Strongly disagree (20)	Somewhat disagree (21)	Neither agree nor disagree (22)	Somewhat agree (23)	Strongly agree (24)
Click to indicate response (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7 I feel I have contributed meaningfully to my undergraduate research project.

	Strongly disagree (17)	Somewhat disagree (18)	Neither agree nor disagree (19)	Somewhat agree (20)	Strongly agree (21)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 I feel I belong in my field of study.

	Strongly disagree (19)	Somewhat disagree (20)	Neither agree nor disagree (21)	Somewhat agree (22)	Strongly agree (23)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Undergraduate research has helped me understand how new knowledge is generated in my discipline.

	Strongly disagree (17)	Somewhat disagree (18)	Neither agree nor disagree (19)	Somewhat agree (20)	Strongly agree (21)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12 I feel confidence in my ability to investigate new questions related to my project.

	Strongly disagree (12)	Somewhat disagree (13)	Neither agree nor disagree (14)	Somewhat agree (15)	Strongly agree (16)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 Working on an undergraduate research project has helped me feel connected to my field of study.

	Strongly disagree (12)	Somewhat disagree (13)	Neither agree nor disagree (14)	Somewhat agree (15)	Strongly agree (16)
Click to indicate response (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Q17 What skills did you employ to complete your project? Please select all that apply.

- Art exhibit (11)
- Development of artistic/performing skills in music, dance, theater, or visual arts (13)
- Environmental field work (4)
- Laboratory work (3)
- Literature review (7)
- Music Concert, Dance Performance, or Theater Show (12)
- Oral communication (8)
- Pedagogical methods analysis or comparison (14)
- Poster preparation (10)
- Research Methods related to my field (2)
- Social and behavioral human subject experiments (6)
- Statistical analysis and hypothesis testing (e.g., regression analysis, t-tests, ANOVA, nonparametric analysis) (1)
- Survey research methods (5)
- Written communication (9)

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Review of the Weber State University Office of Undergraduate Research (OUR)

May 7, 2018

Program Review Site Visit Team

Craig Bergeson, Foreign Language Department, Weber State University

Linda Blockus, Director, Office of Undergraduate Research, University of Missouri

Sally Cantwell, School of Nursing, Weber State University

Mitch Malachowski, Chemistry Department, University of San Diego

The program review site visit team was invited to perform a Program Review of the Office of Undergraduate Research on May 7, 2018. Our review consisted of written materials supplied by the OUR, conversations with the office staff and a full day series of meetings with faculty, students and campus administrators. This report reflects our impressions and recommendations from those interactions. We will use the form recommended to us—a SWOT analysis—to do our review.

It is useful to make a few comments about undergraduate research (UGR) that might help frame this review. Interest in undergraduate research is exploding on campuses of all types as a high-impact practice that benefits students across demographic groups and disciplines—and can provide even greater gains for women, first-generation, and minority students. UGR is a compelling way to meld the interests of faculty to engage in scholarly work with the needs of students for challenging experiences that lead to substantial impacts on their cognitive and affective development. The benefits of UGR have been recognized to impact all key stakeholders in higher education and many campuses are now building and sustaining vibrant undergraduate research programs. Weber State University has been engaged in UGR for many years and the existence of the OUR is one sign of the health of the endeavor on campus.

Strengths

We will begin by describing what we identified as being the strengths of the Office of Undergraduate Research:

1. **University mission.** At the top of the list of strengths is the clear connection between the mission of Weber State University and the goals of Undergraduate Research (UGR) on campus. In particular, the Office of Undergraduate Research has as its mission: *To strengthen and enhance the learning environment at Weber State University by engaging and mentoring students as researchers and scholars within and across the disciplines while maintaining the highest ethical standards.*

Multiple times during our visit we heard the message that undergraduate research is an effective learning experience, that it promotes student success, and enhances student engagement on a campus with an open enrollment policy and a largely commuter population. WSU's motivation for investing in undergraduate research is aligned with its values and institutional priorities and we applaud WSU for their commitment.

2. **OUR staff/physical space.** The OUR is fortunate to have a seasoned and committed staff to run their operations and to help the office continue to move forward. The OUR is well connected to other units on campus and this synergy seems to be a great source of strength and energy. The current administrative structure and reporting lines seem to be well conceived and serve the office well. There are never enough resources to do everything that a unit wants to take on and this is certainly true of the OUR. With a half time director and a shared office manager, there is not excess capacity and some things just don't get the attention that they might if there were more staff. That being said, in our experience, WSU is in the middle tier of schools in terms of resources devoted to undergraduate research. Many schools are now moving to hiring assistant directors to support the work of the office and this model might be considered for WSU.

Students praised the helpfulness and accessibility of staff and repeatedly commented on the student-centered attitudes of the OUR. The faculty similarly spoke highly of the assistance they receive and the professionalism of the office. This culture goes a long way in creating the synergies and relationships that are crucial to the success of an office such as the OUR.

We will make a very brief comment on space and facilities. Certainly, there is not enough space as everyone is pretty crammed together. We are in no position to understand what WSU grade facilities look like all over campus so we cannot really make a recommendation in this area. One consideration that goes beyond square footage is accessibility to the space by those who you want to engage and we know that this has been a topic of conversation for many years.

3. **Faculty.** Undergraduate research programs cannot thrive without a deep and sustained commitment from the faculty. In our conversations with the many faculty members we spoke with, it was clear that this engagement is already in place and this speaks loudly for the future success of UGR at Weber State. The faculty should be lauded for the work that they have put in over the years, much of it with very modest levels of compensation. A continued emphasis on hiring faculty who understand and will participate in UGR will be important in sustaining these efforts as it diminishes the need for in-service training of faculty and the need to convince them of the importance of these endeavors.
4. **Recent initiative: Research Scholars Program.** This is a well-conceived program that exposes students to scholarly processes early in their career. Identifying and supporting students as research scholars early in their matriculation is an important way to help change the culture and make students and faculty more receptive to undergraduate research activities. Certainly, there is a cost to this initiative, but it seems to be money well spent. It is our sense that although this is a very important program, the details of how it will work going forward will be modified as more experience is gained in working with the students. We do recommend that a yearly evaluation of the program be undertaken and changes made as more information is gathered as this is a complicated program to manage and sustain.
5. **Recent initiative: Integrating Undergraduate Research into the Curriculum (IURC).** One of the biggest changes in the world of undergraduate research is the move to develop research-rich curricula that bring a researcher's approach into the classroom. As it is very difficult, if not impossible, for many disciplines to offer mentored, one-on-one research experiences for all students, many are now moving towards using the curriculum to expose students to research. The formation of the new IURC Committee in 2017 and its current work will help keep WSU on the forefront of undergraduate research. Designating certain courses as "Research" courses is a wonderful way to do this and we are particularly impressed that this is being done in majors courses along with general education courses. WSU is way ahead of most institutions in this area and this initiative can serve as a model for other schools to embrace.
6. **Development officer focusing on UGR.** The outside reviewers were jealous of the fact that Weber State has a development officer who has finding external funding for undergraduate research as part of his portfolio. This is very rare on the many campuses we are familiar with and WSU is on the cutting edge of universities in this area. There are many challenges in identifying and cultivating potential donors, but doing so could provide rich benefits for the OUR. This is a long-range effort and we hope that no one is put off by the challenges of finding funding as we believe funding could lead to rich payoffs for the OUR and for UGR on campus.
7. **Hosted a CUR National meeting and the NCUR meeting.** It is impressive that in the recent past, the OUR was able to serve as the host of both the Council on Undergraduate Research national meeting and the National Conference on Undergraduate Research meeting. Hosting just one of them is an enormous undertaking and there are very few campuses that have hosted both meetings. Bringing thousands of people to WSU around the topic of UGR sent signals to the participants that WSU is a leader in the world of UGR. Capitalizing on these activities is an important component of what is possible for the host institution and it seems that this has happened over the years.
8. **Student Funding.** Student research grant funding is a signature program of the OUR and the process is very student-centered. If the quality of the student-written proposal is not up to standards, students are given feedback and an opportunity to resubmit so the process is in and of itself, a learning experience. One unit even works with the students to craft their proposal prior to submitting. Because there is no gpa or credit hours earned requirement to apply, the opportunity is truly open to all students, not just the top students. We give strong kudos for this approach. Students only need to have one letter of recommendation (from their mentor); therefore, this also helps with accessibility. Student travel to conferences is a priority and it appears that money is moved around so that the maximum number of

- students can have the experience each year. A strength of WSU's student funding is that it really is open to all students and not reserved for only an elite subset of undergraduates. We also applaud the documentation and consideration given to ensuring students from all colleges are represented in both programs. A bit of tweaking with outreach and adjustment with the application/definition of undergraduate research should further ensure that the arts and humanities are well represented.
9. **Campus Outreach.** Considerable effort is made to advertise the programs and opportunities of the OUR. There is no doubt that the culture of the OUR is to engage with the campus, with other high impact practice areas and with other allies. This is a real strength of the office even as we comment on this issue a bit later in the report.
 10. **Forms/data collection.** The quality of materials that the office generates for applications, requests and reporting is very strong and clearly a great deal of thought has gone into generating these materials. Faculty we spoke with noted that they have no trouble understanding what is needed and they appreciate how readily they can do what is needed. This is not a minor point as we are all bombarded with requests for all sorts of input, so making it as easy as possible is important.
 11. **Student success initiative.** We did not get to spend much time discussing the expansive student success initiatives at WSU, but we will simply note that it is critical that you have the director of the OUR serving on the Engagement Subcommittee. This gives him direct access to other like-minded people and programs and certainly allows him to tap into the rich human capital that WSU has devoted to high impact practices. The connections between HIPs and other campus activities is a work in progress and we get the sense that there are constant conversations about this, including those in the OUR.
 12. **Strong student learning outcomes.** There is a strong commitment to focusing on student learning outcomes when it comes to research activities on campus. This clearly is a hallmark of a WSU education and the OUR supports this approach in many ways.
 13. **Commitment of Upper Administration towards UGR.** There is a strong connection between the upper administration and UGR on campus and this commitment goes a long way in supporting many of the items we list in this report. Strong programs need faculty buy-in from one end and administrative support from the other end. It is clear that the administrative support exists in large amounts.
 14. **Connections to the Council on Undergraduate Research.** Weber State has a long history of being involved in the CUR and in the governance of CUR by having an institutional membership and by having so many people serving as Councilors in the organization. In this way, WSU is having a central role in the advancement of UGR nationally.

Weaknesses

1. **Number of faculty buying into programs.** The faculty who are involved in UGR activities are passionate about what they do and believe in the student outcomes they are helping facilitate. At the same time, there are large numbers of faculty and departments that are not engaged in UGR activities and who have not embraced these concepts. This is a common ailment that we see on just about every campus we visit. The long term sustainability of UGR is largely dependent on the number of faculty who participate in these efforts, so a continued commitment to show the faculty the impact of UGR on student learning and student outcomes along with its positive impact on faculty and the institution needs to remain front and center. This issue never really goes away no matter how hard it is worked, so constant attention to it is needed. The OUR makes this issue a priority so there already is an understanding of the importance of this issue.
2. **Budget-stability and size of programs.** The OUR has had a stable budget for many years with little growth in the overall expenditures. In some respects, this is acceptable as the OUR staff feels that they have been able to satisfy the needs of the students and faculty by moving some monies around and squaring some of the circles. At the same time though, a certain amount of social engineering could take place if there were more monies available to the faculty and students as more of them might be inclined to participate in the OUR programs. There is a certain comfort level on campus that might need a bit of a jolt to move beyond.
3. **Lack of growth in programs.** Related to Number 2 above is the relative stagnation in the number of participants in some of the OUR programs. Number 4 is one example.
4. **Celebration day steady state.** We were surprised to see that the numbers of students participating in the Celebration day giving posters/talks was not increasing over time as on most campuses where there is a somewhat steady rise of student participation. As shown in Table 14 of the OUR report, there were 100 projects displayed at the 2013 celebration and by 2017, that number had fallen to 91. This is very different

from what we see around the country where these numbers have been exploding on many campuses to the point that many are running out of space to host their celebration days. We recommend that this issue be at or near the top of any prioritized list moving forward as these celebration days provide a host of important outcomes for the students, the faculty and the entire campus.

5. **Lack of training of mentors.** We received commentary from some faculty that more emphasis should be placed on training faculty to be better mentors. This includes mentoring individual students along with mentoring groups of students. We did not follow-up on this issue so it could be that considerable attention is already being placed on it but in any case, the training just might not be getting through to some of those who believe they desire it.
6. **Some faculty equate the OUR to money only.** It is not a surprise that some faculty see the OUR as a place to get money and grants to help them do their jobs. This is not uncommon and in reality, the OUR should be helping out the faculty and students with direct support and they do it quite well. It also is true that the OUR offers more than just financial support but for many of the faculty, this has not gotten through to them. Ways to change faculty perceptions should be explored and it might even be desirable, if it has not been done recently, to poll the faculty to see what offerings interest them the most. Additional (non-monetary) resources and workshops for students would also help to change this image.
7. **Total number of students doing research.** The OUR tracks its programs well and has a good understanding of who is participating in OUR offerings (research grants, travel funding, Scholars, Symposium, ERGO). What is occurring throughout the campus is much less known and indeed, the numbers of faculty and students involved in UGR activities is not known. One result of this is that when the OUR compiles numbers of participants, it greatly understates the activity on campus and it makes it look like there is much less interest than actually exists. We frequently have campuses we work with do an inventory of current activities and they are always amazed at the actual level of activities. We see this as an important issue as this underrepresentation masks the true level of activities on campus. It would also be nice to more accurately know who is participating as it might be a way to identify more allies for the office's activities.
8. **Lack of overall advisory group.** Although there is a grants committee, a scholars group and a group working on the curricular issues, there does not appear to be a functioning overall undergraduate research advisory group. Thought should be given to getting this group in place and functioning. We intended to have a conversation about this while on campus but it did not happen so we may have missed an advisory group's level of engagement.
9. **Determine value added to WSU by UGR.** This is a broad issue but one that does come to mind. As a high impact practice, we already know that generally speaking, activities such as UGR have substantial impacts on student learning and student outcomes. One of us thought that it might be possible to take this local and try to determine what the actual impact is at WSU. We don't have any particular suggestions on how this assessment might be done but the literature on UGR might be of help in designing some strategies.
10. **There is not a great deal of incentive for faculty to do UGR.** This is not exactly the purview of the OUR but more of a general need to bring faculty on board. Piling on additional expectations and work without some level of remuneration is not a great strategy (although we all tend to do it on some level) to get people to participate. Faculty generally don't expect full compensation but rather are fine with some small level of support.
11. **Academic credit for UGR.** It does not appear that all students (regardless of discipline) have the opportunity to earn academic credit for doing research. Working towards this goal might pay other dividends as it would engage faculty and departments in a conversation about UGR and its benefits.

Opportunities

1. **Ergo** - Ergo is the annual campus undergraduate research journal/publication and its presence provides a very useful public display of UGR on campus. ERGO provides a publication opportunity for students and opportunity for student learning (for example, students were excited to get constructive edits on their submissions). It also provides the campus with documentation of OUR travel awards to present at external conferences. We believe that there are several additional opportunities for ERGO to document and advocate for undergraduate research:
 - a. The call for articles should also consider soliciting creative works accompanied by statements by the artists.

- b. The WSU logo and name should be prominently featured on the front cover and then distributed to donors, community and campus leaders and used for recruitment efforts (i.e., Presidential Scholars). It also can be distributed to higher education boards and state legislative leaders. We have seen other campuses use these publications quite extensively to enhance funding, admissions and overall visibility.
 - c. Each article or abstract could include additional information on the student, mentor, and funding. This could include student hometown/high school/county; student major/year in school; information on the mentor (department, academic rank, and if they fill a named-chair position or hold a distinguished title... John B. Goddard Endowed Chair in Global Supply Chain Management, Nye Outstanding Faculty Member, UCC Presidential Awardee); and any funding or other recognition the student received (WSU travel award, conference award/funding, outstanding Economics senior, etc.).
 - d. You might consider having all students that receive OUR travel funding having their abstract included. Or, at a minimum, a list of students that present at the campus Symposium could be included. Students that present at NCUR could also be included.
 - e. There may be other opportunities to document outcomes and accomplishments related to undergraduate research in ERGO. The OUR staff and advisory board should carefully consider if ERGO is to be a peer reviewed journal, a documentation/annual report of undergraduate research, or a hybrid.
 - f. A cost/benefit analysis could be conducted that includes the scholarships for student staff (and student learning benefit), staff/faculty time, printing and dissemination costs, impact of distribution, and use as a record keeping device. If it is not already archived on a website, some thought might be given to archiving the table of contents.
2. **Dissemination.** The OUR is engaged in many different activities and does a very nice job in educating the campus as to its role in student learning. We can't help but think that there is always more that can be done in this realm as in our conversations with faculty, there was a mismatch between what the OUR shares with them and what the faculty are hearing. This is a common predicament and it certainly speaks more directly to how faculty frequently function, but the reality is that other approaches by the OUR might be fruitful.
 3. **Development opportunities.** With the help of the development office, continued emphasis on raising funds for additional faculty and student support could be pursued. We can't help but imagine that faculty could be involved in these efforts as they can speak passionately about their work with students.
 4. **Peer to peer experiences (students/faculty).** There is no doubt that we are greatly influenced by our peers so embracing more student-student and faculty-faculty conversations could be invaluable in moving the needle towards more undergraduate research on campus. We were incredibly impressed by the passion of the students with whom we spoke when they described their UGR experiences and their relationships with their mentor and the other students with whom they worked. Thinking of ways to further these interactions could be quite productive.
 5. **Summer activities.** We think that we understand the campus culture reasonably well and know that engaging students in research in the summer is a great challenge. However, UGR on many campuses, including those that are on the cutting edge of the UGR world, largely are built on summer research programs as the intensity of these experiences cannot be replicated during the academic year. If additional funds were available through fundraising or internal monies, building a summer research program might be one of the top priorities for new programs. It is hard to visualize WSU as a national leader in UGR without a vibrant summer program but we certainly can see you as a leader if more students impacted the intellectual climate on campus in the summer.
 6. **Combine the research symposium with other presentations (on campus).** The research symposium where students present their work is well received on campus. As stated earlier though, the number of student presentations has stagnated for a number of years. One way to possibly build some new momentum is to combine some of the other campus activities where students are presenting their work (in the Nursing School for example) with the symposium. This might help create an enhanced atmosphere for the students and additional energy that could help grow this very important event. We have seen many campuses struggle with this issue as there are competing interests among the many areas so we don't think this is a trivial issue to resolve.

7. **Scholars program needs to be refined.** We fully expect that this will happen over the years and are confident you are on the right path with this. At some point, stepping back and celebrating the successes could be important for all.
8. **Continued alignment with WSU mission could support funds.** We are impressed with how naturally UGR fits with the institutional mission so all we are saying is keep moving down this path.
9. **Develop credit opportunities for students regardless of department.** Although our task is to review the activities of the OUR, we also have impressions related to the UGR efforts throughout the campus. The OUR, through the appropriate academic offices, should consider reviewing how students receive research credit for the involvement in UGR. We picked up that many departments don't have a way for students to register and get credit for UGR or at a minimum, there is a lack of consistency as to how this issue is handled. This is an academic issue that is not necessarily within the purview of the OUR, but continuing to prime this conversation could have great value.

Threats

1. **Budget stability.** Our concern is the inertia that could be built up over time so we recommend a more aggressive call for additional funding. Justifying these requests seems to us to be reasonable as the workload in the OUR just continues to grow.
2. **Lack of shared buy-in.** Faculty are bombarded with initiatives and in some ways, one of the threats to UGR on campus is that faculty may move on to other initiatives that might give them greater support and other benefits. There are many faculty advocates who could be tapped to help with these efforts.
3. **WSU's plan for graduate programs.** As a comprehensive university, there is overlap between graduate student research and the campus research infrastructure and with undergraduate research. For example, the OUR handles graduate student travel applications for the campus. Research compliance is monitored by the OUR staff, but only for undergraduates that receive funding in their office. Some colleges/departments combine and host research events for faculty, graduate students, and undergraduates. Because graduate students do not have their own research dissemination infrastructure and support, there is the danger of mission creep of the Undergraduate Research Office to fill this gap. Maybe this is acceptable, but it should be done in an intentional way with everyone understanding the underlying issues and considerations. We recommend that the administration acknowledge the current and potential overlaps of graduate and undergraduate research and match them with research infrastructure support. Additionally, consider aligning resources with the proper unit(s) after the responsibilities for research infrastructure are more fully articulated and assigned.
4. **Too many new things (don't lose sight of outcomes).** There are many components to UGR and in the OUR. We have seen UGR on other campuses become quite disjointed as so many programs are layered on top of each other. Yearly prioritization of items by the OUR will go a long way in maintaining a cohesive program.
5. **As so many initiatives and planned and implemented, there is concern with staffing in the OUR.** The OUR staff is already juggling grants and travel funding (including some work for graduate students), the Symposium, coordinating NCUR participation, ERGO (journal), general messaging and much, much more. The new Scholars Program has been added, along with robust discussion and planning for "R" designated courses. The review team is recommending additional data collection (see below). If and when additional demands are placed on staff and new initiatives are proposed, staff resources need to be considered or OUR runs the risk of overcommitting.
6. **Need to expand operational definition of students served/documented.** Currently students can be served by the office (and therefore documented) through funding (grants, travel, Scholars) or participation in the Symposium or submitting a publication for ERGO. There are other students at WSU that are likely participating in undergraduate research experiences and attempts should be made to reach out to them and document their participation. OUR needs to demonstrate it serves students beyond those it directly funds or it will not be seen as the campus umbrella for undergraduate research resources and initiatives. Reaching out and partnering with department research days, offering student workshops, and positioning the Symposium as THE undergraduate research event will help to solidify its position on campus. Additionally, requiring students who are selected for grant or travel funding, NCUR or Utah Conference participation or publishing an article in ERGO to present at the campus Symposium will increase participation and diversity of disciplines and raise the profile of the Symposium. As undergraduate

research in the curriculum is implemented, students enrolled in these courses also become part of the population served.

Recommendations

- 1. There are many recommendations embedded in the document that can be addressed, but we just wanted to highlight a few of them here.**
- 2. Workshops and opportunities for student development.** The OUR is often viewed by faculty and students as the office that provides funding and puts on the Symposium, and little else. There is a great opportunity for the OUR to coordinate and present a variety of workshops for students to aid in their professional development as undergraduate researchers and scholars. Topics such as getting started in research, working with your mentor, designing a poster, writing an abstract, presenting your research, etc. are standard offerings by most undergraduate research offices. Additional topics can be offered depending on student needs and strategic directions of the OUR (i.e., applying for summer research programs, applying to graduate school, presenting to a lay audience, making the most of conference attendance, team work). Workshops also will have the benefit of encouraging a peer community and bringing more students into the OUR sphere of influence.
- 3. Create a faculty community and offer mentor development opportunities.** Faculty who are advocates for undergraduate research across a campus often don't know of other advocates in other departments. Fostering a monthly or once/semester gathering for interested undergraduate research mentors will encourage a faculty community, cross discipline discussions, valuable feedback for OUR, and strengthen faculty support. We heard of no efforts for faculty development as mentors. We suggest that OUR and a group of experienced faculty mentors coordinate a few opportunities for development/training each year. These could be tailored to new faculty, faculty who have students receiving funding, a targeted school or college, or an open call for participation. The sessions could be organized as a panel discussion, a luncheon speaker, or a workshop lead by an outside expert. While we do not have a recommendation on a particular delivery method or topic, we do strongly advise that attention be given to purposefully integrating mentoring into faculty professional development opportunities at WSU.
- 4. Create an advisory board for OUR/undergraduate research at WSU.** While there are various committees for different programs/funding that seem to be working well, there is no overall advisory committee for OUR. We recommend forming a standing Advisory Committee that will include some overlap with the committee members, but also will strategically include influential leaders and advocates from across campus. WSU may wish to include non-faculty professionals in development, student affairs, enrollment management, advising, etc. on the Advisory Committee. External stakeholders may also prove to be beneficial to include and help drive home the message to campus leadership that employers are seeking skills that undergraduate research can develop.
- 5. Celebration Day.** Thought should be put into determining how to increase participation in student numbers and in departments represented at the annual Celebration Day.
- 6. Student grant program.** After a number of years of the grant funding program, OUR has built up a sizable pool of awardees to begin to detail some data in addition to disciplines/colleges represented. We suggest that OUR start tracking (and go back a few years if possible) how the funding is being used: student travel, equipment and supplies, direct student support, fees to attend workshops, etc. This information will help articulate funding needs and fundraising targets. Additionally, OUR may find out that some units/student populations are successfully getting funds for direct student support (stipends, salary), while other units have been reluctant to ask for student support. There may be inequities across student demographics or disciplines. This data may help inform OUR about any gaps in participation due to student financial need.

Currently there is no systematic tracking of student outcomes after a student receives a grant. OUR should be tasked with collecting basic information 1-3 years after funding, which would include the graduation status (including final major/gpa) of student grantees, any awards/honors resulting from conducting the research (including conference presentations and publications), other honors and awards, and post-graduation plans. Additionally, a final "summary" of the student's project/results should be required. This type of information will help OUR advocate for continued/increased funding and provide data and personal stories that illustrate the benefits of undergraduate research. This tracking can also help to build an alumni network that will benefit current students and WSU as an institution.

7. **Documenting outcomes from grant dollars.** There may be value in digging deeper into the outcomes from the grant monies allocated by the OUR to faculty and students. Much of this already exists as the monies are frequently used for travel expenses to conferences but there are opportunities to further understand some of the other outcomes.

8. **Curriculum initiatives.** We strongly recommend that you stay the course on moving towards a research-rich curriculum in as many departments/units as possible. This is the main thrust of many of the advances in UGR and this approach is particularly well suited for institutions that do not focus on summer-based research programs.

Craig Bergeson, Foreign Language Department, Weber State University

Linda Blockus, Director, Office of Undergraduate Research, University of Missouri

Dr. Linda Blockus is the founding director of the Office of Undergraduate Research at the University of Missouri. Her leadership in the Council on Undergraduate Research includes more than fifteen years as an elected councilor, a term as chair of the Undergraduate Research Program division and service on the Executive Board, election to the Nominations Vetting Committee, and leadership on the Student Programming Task Force. With Joyce Kinkead (Utah State University) she co-edited the book "Undergraduate Research Offices and Programs: Models and Practices" (2012). Dr. Blockus also co-authored CUR's "Characteristics of Excellence in Undergraduate Research (COEUR)", which serves as an aspirational blueprint for programs and campuses. In addition to articles published in the "CUR Quarterly" journal (now "SPUR"), she served as guest editor for a themed issue on measuring student participation. At MU, she has provided leadership on undergraduate research grants from NSF, NIH, and HHMI. She has lead a new campus initiative to celebrate the visual art and design scholarship of undergraduates. Dr. Blockus earned her PhD in higher education at the University of Missouri.

Sally Cantwell, School of Nursing, Weber State University

Mitch Malachowski, Chemistry Department, University of San Diego

Mitch maintains an active research program involving the bioinorganic chemistry of copper and iron containing proteins and in supramolecular chemistry and has received funding from the National Science Foundation, the Petroleum Research Fund and the Research Corporation. During his time at USD, he has worked with over 130 research students and he has published over 50 papers, many of them with undergraduate co-authors. Mitch also is interested in the relationship between research and student learning and has published articles on fostering administrative support for research, research vs. student-oriented scholarship, promoting research in non-science areas, the role of mentoring in research, starting a research across the curriculum movement and changing institutional culture. He recently received a \$1.8 million grant from the NSF to assist schools interested in developing more comprehensive undergraduate research programs and research-rich curricula.

Mitch was president of the Council on Undergraduate Research from 2002-2003 and has taken on many roles in the organization. Mitch has received several awards including one for teaching excellence from the University of North Carolina, the administrator of the year award at USD, the 2014 Outstanding Research Mentor Award at USD, the 1999 Davies Award for Teaching Excellence at USD, three University Professorships from USD and the Charles B. Willard award for distinguished career achievement from Rhode Island College. He was the recipient of the 2014 CUR Fellows Award and was named the 2014 CASE/Carnegie Foundation California Professor of the year.

Appendix L: Self-Study Team Responses in Table Form, 2017-2018

**Office of Undergraduate Research
Program Review Action Plan
July 25, 2019**

Recommendation	Plan of Action	Timeline
<p>1. <i>Workshops and Opportunities for Student Development</i></p> <p>The review team recommends that the OUR take steps to provide workshops and trainings for students to aid in their professional development as undergraduate researchers and scholars. OUR has offered these opportunities for several years but steps will be taken to increase them and make them more accessible for students and faculty.</p>	<ul style="list-style-type: none"> • Survey and contact current/former students involved in OUR and Advisory Board to determine areas of need for students. • Develop training opportunities and seek faculty expertise in areas • Offer training opportunities for students. 	<p>March 2020 – survey current/former students to determine areas of need April 2020 – discuss areas of need with Advisory Board Summer 2020 – develop training opportunities Fall 2020 – Offer training</p>
<p>2. <i>Create a Faculty Community and Offer Mentor Development.</i></p> <p>The review team recommends that OUR encourage a faculty community of mentors and develop training for interested faculty. OUR currently does provide professional development activities and resources for faculty mentors. These activities were outlined in the Self-Assessment but may have been overlooked by the review team. We do agree that efforts need to be enhanced in order to grow a faculty community of mentors and increase opportunities for professional development.</p>	<ul style="list-style-type: none"> • Meet with faculty involved in OUR, Advisory Board (see #3 below) and TLF to determine areas of need for faculty and strategies for proceeding. • Develop training opportunities and seek faculty expertise (internal and external) in areas identified. • Offer training opportunities for faculty. 	<p>March 2020 – survey faculty to determine areas of need April 2020 – discuss areas of need with Advisory Board and TLF Summer 2020 – develop training opportunities Fall 2020 – Offer training</p>

Recommendation	Plan of Action	Timeline
<p>3. Create an Advisory Board.</p> <p>The review team recommended creating an advisory board. An advisory board was created in the 2016-2017 academic year but met only a few times. Better selection of members should assist in recruiting a dedicated advisory board.</p>	<ol style="list-style-type: none"> 1. Meet with key faculty and administrators to brainstorm advisory board make-up and expectations. 2. Secure members with clear understanding of commitment and expectations 3. Advisory Board meeting calendar established and functioning. 	<p>October 2019 – Advisory Board established December 2019 – First Advisory Board Meeting</p>
<p>4. Celebration Day.</p> <p>The review team recommended that the Undergraduate Research Symposium and Celebration should be examined to develop strategies to increase student participation.</p>	<ol style="list-style-type: none"> 1. Solicit feedback from faculty and student participants on symposium. 2. Provide data to Advisory Board (see #3 above). 3. Task Advisory Board with developing strategies to enhance participation. 4. Begin implementation of strategies. 	<p>November 2019 – Feedback on symposium collected. December 2019 – Data provided to Advisory Board January 2020 – Implement strategy</p>
<p>5. Student Grant Program/Documenting Outcomes from Recipients.</p> <p>The review team suggested that OUR track the success of students participating in grant programs to better understand the demographics and outcomes of undergraduate research students. OUR is currently doing this but will add additional measures of student success.</p>	<ol style="list-style-type: none"> 1. Review current data collected and share variables with key faculty, administrators and campus offices (e.g. Office of Institutional Effectiveness) to solicit additional information. 2. Work with Institutional Effectiveness to develop a “Data Dashboard” for OUR 3. Develop assessment plan and strategy to collect and enter data. 4. Implement assessment plan 	<p>May 2020 – Share annual data collected with key personnel. June 2020 – Data Dashboard completed August 2020 – Assessment plan completed</p>
<p>6. Curriculum Initiatives.</p> <p>The review team commended OUR for working with departments and programs to move towards a research-rich curriculum. OUR will continue to develop and strengthen this initiative.</p>	<ol style="list-style-type: none"> 1. Re-assemble OUR Curriculum Committee 2. Task committee to review current curriculum initiatives and develop strategies, including adding course attribute for research intensive courses. 3. Begin implementation of plan. 	<p>October 2019 – OUR Curriculum Committee Chair identified. November 2019 – Curriculum Committee meets to develop strategies. February 2020 – Course attribute draft proposal completed. March 2020 – Course attribute proposal submitted to University Curriculum Committee</p>

Recommendation	Plan of Action	Timeline
<i>Other Recommendations</i>		
<p>7. OUR Staff/Physical Space</p> <p>The review team recommended that OUR has grown to a point where an Assistant Director position is needed to support the work of the office. In addition, the lack of physical space has resulted in several staff and coordinators having to work from home, and limits the expansion of programs. This arrangement reduces the ability to coordinate and work effectively.</p>	<ol style="list-style-type: none"> 1. Meet with Associate Provost and Advisory Board to develop a staffing/space action plan. 2. Implement plan. 	<p>December 2019 – Staffing/Space Action Plan completed July 2020 - Job description crafted. September 2020 – Assistant Director hired. August 2020 – Additional OUR space secured.</p>
<p>8. Budget and program growth</p> <p>The review team noted that the OUR budget has remained stagnant over the last several years. This impacts the ability of OUR to grow programs and offer new opportunities for students and faculty.</p>	<ol style="list-style-type: none"> 1. Meet with Associate Provost to discuss resource needs and justification. 2. Develop budget plan. 3. Implement plan. 	<p>January 2020 – Meet with Assoc Provost to discuss resource needs February 2020 – Budget plan developed</p>

Office of Undergraduate Research

Program Review Site Visit

Dean's Response

Academic Year: 2017-18

Submitted by:

Associate Provost, Brenda Marsteller Kowalewski

December 23, 2019

Introduction

This program review of the Office of Undergraduate Research (OUR) is the first for the program since its inception in 2004. The OUR director and staff prepared and facilitated a thoughtful self-study, Program Review Evaluation Team site visit and report, and a realistic response to the Evaluation Team site visit report with next steps clearly articulated. The self-study was thorough and included relevant descriptions and data over time on programs, services, learning outcomes, structure and budget. It is clear that OUR serves mostly students but is mindful of the faculty engagement required to make this office successful. The self-study document, along with interviews during the site visit on May 7, 2018 provided solid background material for the Site Visit Team.

The Program Review Evaluation Team was exceptional with several national experts in undergraduate research represented. The team is well versed in the significance of undergraduate research as a high impact practice and the positive benefits it has for marginalized groups. The Evaluation Team's careful review of the OUR program was informed by feedback from the Weber State University community of faculty, staff, students and administrators, as well as the experiences of the review team members themselves. A SWOT (strengths, weaknesses, opportunities and threats) analysis was conducted to inform a set of seven official recommendations about how to better support students, faculty mentors and the program itself. The commendations recognize the long-term consistency in leadership of OUR, the commitment of the administration and faculty to undergraduate research and the benefits of situating OUR with other high impact programs at the university.

Both commendations and recommendations made by the Site Review Team and the OUR program's response to them are addressed below.

Site Visit Team Commendations

The Site Visit Review Team's commendations for the OUR program are consistent with my own observations of OUR. There is clear alignment between the mission of OUR and the university's mission and emphasis on student success. The Site Review Team noted the seasoned leadership of OUR and the long history WSU has with the national Council for Undergraduate Research (CUR). Two new initiatives (Research Scholars Program and Integrating Research into the Curriculum) were also noted as innovative and putting WSU ahead of the pack nationally. Resources dedicated to funding student research and the addition of a development officer assigned to OUR to help raise more funding for student research was

given high praise. OUR's track record of hosting campus, statewide and national undergraduate research conferences was also noted as strength. The dedication and commitment of upper administration and faculty in supporting students' research and student learning was also noteworthy to the Site Review Team. These commendations are well deserved.

Site Visit Team Recommendations and Program Response

The recommendations from the Site Visit Team were well-informed and very helpful for moving the Office of Undergraduate Research forward. The team made recommendations (briefly summarized below) to address the following challenges identified in their report:

- Small number of faculty buying into programs
- Maybe too much budget-stability limits size of programs
- Lack of growth in programs
- Celebration day steady state
- Lack of training of mentors
- Some faculty equate OUR to money only
- Total number of students doing research is unknown
- Lack of overall advisory group
- Determine value added to WSU by undergraduate research
- There is not a great deal of incentive for faculty to do undergraduate research
- Not all students have the opportunity to earn academic credit for UGR

Recommendation #1: Workshops and opportunities for student development.

The Site Visit Team recommends that the OUR take steps to provide workshops and trainings for students to aid in their professional development as undergraduate researchers and scholars. OUR has offered some training opportunities but is committed to getting feedback from past students to inform the development of more trainings for students.

Recommendation #2: Create a faculty community and offer mentor development opportunities.

The Site Visit Team recommends that the OUR encourage a faculty community of mentors and develop training for interested faculty. OUR noted in their response to the Site Review Team report that they currently do provide professional development activities and resources for faculty mentors. Although I agree that some mentor development opportunities are being offered, I would encourage OUR to work with the Teaching and Learning Forum (TLF) to develop a Community of Practice for faculty interested in undergraduate research. This is a good way to leverage an existing structure to provide more support to faculty mentors.

Recommendation #3: Create an Advisory Board

The Site Visit team recommends creating an advisory board. Perhaps a better recommendation would be to better utilize the advisory board that was created in the 2016-2017 academic year and only met few times. OUR's outlined action steps to brainstorm advisory board members to help reinvigorate this body are good. Setting up a schedule of regular meetings is also good. I would encourage OUR to talk with other high impact programs with advisory boards to help determine the purpose and function of the OUR advisory board before inviting new members to it.

Recommendation #4: Celebration Day

The Site Visit Team recommends that the Undergraduate Research Symposium and Celebration should be examined to develop strategies to increase student participation. OUR is taking a systematic and data driven approach to reimagining this celebration and plans to utilize their reinvigorated advisory board in the process. The only other thing I would encourage OUR to do is to consider combining the OUR Symposium with celebrations of other high impact educational experiences. I think this would create an opportunity to increase participation, foot traffic to the event and tax the time of our campus community less.

Recommendations #5&6: Student Grant Program/Documenting Outcomes from Recipients

The Site Visit Team recommends OUR track the success of students participating in grant programs to better understand the demographics and outcomes of undergraduate research students. OUR notes that they are currently doing this but will add additional measures of student success. I believe that OUR will make the most headway on this recommendation with the creation of a High Impact Educational Experience (HIEE) dashboard where OUR data can be accessed via a specific HIEE filter. This dashboard would contain data regarding broader student success indicators, like retention and completion of students, for each HIEE at WSU.

Recommendation #7: Curriculum Initiatives

The Site Visit Team commended OUR for working with departments and programs to move towards a research-rich curriculum and encouraged them to continue to pursue this work. OUR is committed to doing so. I strongly encourage OUR to have an undergraduate research course designation proposed and accepted by Faculty Senate Curriculum Committee by end of Spring 2020. This designation will help students identify where they will find undergraduate research opportunities throughout the curriculum, it will help faculty demonstrate in the rank and tenure files just how much undergraduate research they are currently facilitating and it will help OUR get a more accurate picture of undergraduate research at WSU.

Additional Recommendations Included in the Site Visit Team Report but Not Listed in the Official List of Recommendations

Embedded within some of the observations in the “Weaknesses” area of the report were several other recommendations for OUR that were noteworthy even though they did not appear on the official list of recommendations. These include:

Recommendation #8: OUR Staff/Physical Space

The Site Visit Team recommended that OUR has grown to a point where an Assistant Director position is needed and there is not enough physical space for all staff to work in the office. This is an accurate observation on the part of the review team and is a concern I also share. The OUR director, John Cavitt, and I have been in several conversations about both the need for an assistant director and the need for more space. Most programs on campus have similar staffing and space challenges. We are working through solutions but these won't be immediate.

Recommendation #9: Budget and program growth

The Site Visit Team noted that the OUR budget has remained stagnant over the last several years. This impacts the ability of OUR to grow programs and offer new opportunities for students and faculty. I concur with this observation as well. It will be imperative that OUR collect data through the undergraduate research designation on courses to help make the case for additional funding. Having more

accurate data about the full scope of undergraduate research activity at WSU will help inform budget discussions in the future.

Conclusion

Overall, the Site Visit Review Team's report affirms that OUR is on the right track but may be showing signs of stagnation in terms of participation on the part of students and faculty. The encouragement to pay attention to documenting program growth is critical for increasing staffing and funding to the program. The focus on integrating undergraduate research into the curriculum is an excellent way to help more students benefit from undergraduate research as a high impact practice *and* expand the scope of support OUR provides to students and faculty at WSU. The Site Visit Review Team report and OUR's response to it seem completely appropriate. This process has been a good opportunity for OUR to reflect on its long-standing impressive presence and impact at WSU. By leveraging existing strengths and making some of the changes recommended by the Site Visit Review Team, I think OUR will successfully grow and be appropriately resourced.