

DU Research Grants Fuel Undergraduate Student Creativity and Academic Projects

Anit Tyagi¹, on behalf of the Editorial Board

¹DUURJ Editor at Large, University of Denver

1 OVERVIEW

The University of Denver has several funding options for undergraduate students seeking to carry out research under the tutelage of experienced faculty members, present their findings on a national or international stage, and implement scholarly community outreach initiatives. These funding options have helped defray the costs associated with conducting and presenting research for thousands of students and faculty and are an important facet of the research experience at DU. Here the Editorial Board explores the various funding options undergraduate students have access to throughout their research experience(s) at DU.

2 PARTNERS IN SCHOLARSHIP (PINS) GRANTS

Undergraduate students looking to collaborate on a research project with a faculty member should consider applying for a Partners in Scholarship (PinS) grant which provides up to \$1,500 in funding. PinS grants from the Undergraduate Research Center (URC) may be used for supplies, equipment, and research-related travel; however, PinS grants cannot be used to fund tuition, internships, service learning, classes, or lessons. Before applying for this unique opportunity, students should work with their faculty partners to develop a detailed project proposal. In addition, while most partnerships involve one-on-one work with a faculty member, students are permitted to work with multiple faculty members or with other students. All projects must be finished by June 1st of the academic year and students funded by this grant are required to present their findings at the annual DU Research and Scholarship Showcase held in Spring Quarter. PinS grant applications and project proposal deadlines occur once every quarter. URC faculty grant reviewers look favorably upon well-written, thorough project proposals that can be understood by a general audience.

3 STUDENT SCHOLAR TRAVEL FUND (SSTF)

Undergraduates who have a paper, poster, or other creative scholarly work that has been accepted for professional presentation at an academic conference or meeting are able to apply for the Student Scholar Travel Fund (SSTF) to help lessen the costs (up to \$1,000) associated with travel and attending the event. In order to be considered for this type of funding, travel should be for the purpose of presenting academic research and the travel must be completed before graduation. SSTF applications are accepted and reviewed on a rolling basis throughout the academic year and undergrads may only receive one travel grant per academic year. Students may apply at any time for this grant, including at the time they submit their work to the conference or meeting. In such cases, funds will be available upon confirmation of acceptance. Undergraduates funded by this grant are required to present their research at the annual DU Research and Scholarship Showcase held in Spring Quarter. Students applying need to provide details on the academic conference or meeting they plan on attending, along with an itemized budget and a title and summary of their presentation.

4 SUMMER RESEARCH GRANTS

Summer Research Grants, like PinS grants, are intended to promote student and faculty collaborative research projects. Undergraduate students, who are not graduating seniors, may request up to \$3,500 to help fund a project that lasts between one and ten weeks and may include a payable stipend award in addition to project expenditures. Additionally, while most partnerships involve one-on-one work with a faculty member, students are permitted to work with multiple faculty members or with other students. If working with other students, each student must submit an application stating their personal contribution to the project and is eligible to receive up to \$3,500. All award funding must be used by September 1st of the upcoming academic year. Funding from the URC may be used for supplies, equipment, and research-related travel; however, the



Figure 1. University of Denver undergraduate students outside the Ritchie School of Engineering and Computer Science collecting data for a research project

Summer Research Grant cannot fund service-learning programs, tuition, DU courses, or lessons. Summer Research Grant awardees are required to attend the annual DU Research and Scholarship Showcase held in Spring Quarter to learn more about the summer research experience and the expectations and opportunities that come with it. Following their summer research experience, awardees will then have to present their research findings at the next Showcase.

For the 2019-2020 academic year, the URC gave out 23 PinS awards, 50 Summer Research Grants, and 16 SSTF awards, for a total of 89 funding awards. Grace Warner, Program Coordinator of the URC, mentioned, "Funding for academic year PinS awards is typically used for lab supplies and project materials. For the Summer Research Grants, the majority of the funding goes to paying students for their research. We typically give out between 85-100 awards each year." To learn more about PinS, SSTF, and Summer Research Grant funding, contact the URC at urc@du.edu.

DU research faculty have appreciated the funding support provided to their undergraduate students by the URC. Robert M. Dores, Ph.D., Professor in the Department of Biological Sciences, said, "I have had several students take advantage of the PinS program, the Summer Research Grant program and the Travel Grant program provided by the URC. My goal is to engage undergraduates in original research projects that overlap with my personal research projects and the projects of my graduate students. External funding sources cover much of the expenses associated with these projects, but not all. The funds provided by the URC has made it possible to engage undergraduates to a significant degree in my research program, and since these programs were started 20 students have had their research published in refereed journals. More specifically, Megan De-

yarmond received travel funds to attend the Endocrine Society meeting in Orlando, Florida in 2017. Megan went on to medical school at Georgetown University. Alexa Thomas received a Summer Research Grant and was able to complete two peer-reviewed articles before graduation, and she is completing her medical training at the Mayo Clinic."

Daniel Linseman, Ph.D., Professor in the Department of Biological Sciences and Faculty Director of the URC stated, "I am a professor in the Department of Biological Sciences, and I have been a faculty member at DU for 15 years. Since joining DU in 2006, I have supervised 60+ undergraduate research projects (PinS and Summer Research Grants) and have mentored 25 undergraduate students to completion of their thesis for distinction or honors. Given my past experience, I can say without hesitation that mentoring undergraduate students in research has been a highlight of my academic career. I strongly encourage students to participate in the many opportunities discussed in this issue of the DUURJ. The URC is proud to sponsor the PinS and Summer Research Grant programs that fund research projects based on student/faculty partnerships throughout the academic year and summer, respectively. In addition, we also sponsor the Student Scholar Travel Fund (SSTF) to assist students who wish to present their scholarly and creative work at conferences and meetings. If you have questions regarding how to get involved in any of our programs, please check us out online at <https://www.du.edu/urc/about-us.html> or email us at urc@du.edu."

5 SPECIAL HONORS FUNDING

Undergraduate students who are part of the DU Honors Program and are engaged in research for their thesis



Figure 2. University of Denver Anderson Academic Commons, home of the University Writing Center

or other approved academic project are eligible to apply for Special Honors Funding. This grant provides up to \$1,000 in supplemental funding to help support the student's academic work by subsidizing the costs of scholarly pursuits including the purchase of research materials and travel to conferences and meetings. Students applying must provide an itemized budget and a detailed description of their research project and its role in their academic requirements and plans. Funding applications are accepted on a rolling basis. To learn more, contact the Honors Program at honors@du.edu.

Katherine Tennis, Ph.D., Director of the Center for Undergraduate Scholarship and Honors and Faculty Director of the Honors Program, mentioned, "Special Honors Funding is a great perk of being an active member of the Honors program. It can be used for costs associated with completing your distinction research project – including things like travel, access to data or archives, materials access, or other research expenses. The funding is competitive and is not guaranteed, but we try to provide resources based on need and merit to as many Honors students as possible."

6 ADVANCING COMMUNITY ENGAGED (ACE) STUDENT SCHOLARS GRANTS

As part of DU Grand Challenges (DUGC) initiative, undergraduate students are able to submit project proposals for community-engaged research or creative work that is designed to improve daily living, create economic opportunities in our local or global communities, and/or facilitate deliberation and action for the public good. Projects focused on improving daily living might work on food and housing insecurity, crime and safety, migration, and/or urban sustainability. In addition, projects focused on increasing economic opportunities might work on education access, improving transportation options, decreasing poverty, advancing entrepreneurship, and/or employment rights and workplace equity. Finally, students focused on facilitating deliberation and action for the public good might

work on projects that inspire civic engagement, amplify youth voices, prepare new leaders, and/or strengthen our connections to one another.

Several undergraduate research projects have recently been funded through these grants. For example, two International Studies undergraduate students, under the supervision of Bob Uttaro, Ph.D., partnered with Kwale County, Kenya to study best practices in local conservation given that local communities are often excluded in larger conservation efforts leading to lower indigenous knowledge of conservation. The project is a case study undertaken with Kwale County, Kenya where collaborative conservation efforts have been largely successful. Their study aims to determine which sources of knowledge will best inform the efforts in this community to make them successful in achieving their conservation goals. They claim that understanding the sources of knowledge that best inform the successful conservation efforts of Kwale County will contribute to the creation of a more effective and robust conservation model for efforts throughout Kenya.

Another ACE student scholars grant example includes a Psychology undergraduate student, under the supervision of Barbekka Hurtt, Ph.D. in the Biological Sciences Department, who partnered with the Denver Rescue Mission to pilot and evaluate a comprehensive nutrition education program at the Crossing Center, a transitional housing program for men experiencing homelessness in Denver. In their research program, participants completed pre/post tests to measure changes in nutrition knowledge and confidence in cooking healthy meals. Their results will be compared with an assessment (currently underway) of the Crossing's general population on these same measures.

Individual students may apply for an ACE grant, issued by the Center for Community Engagement to advance Scholarship and Learning (CCESL), that provides up to \$2,000 to support a community-engaged research or creative work project that is faculty-mentored. Students interested in pursuing a project must work with a faculty mentor who is familiar with the subject

area. Interdisciplinary teams for research and creative work are highly encouraged and groups of two or more can apply for up to \$5,000. Applications are accepted on a rolling basis and are reviewed once every quarter. In the 2020-2021 academic year, DUGC was able to award almost \$45,000 in ACE Grant funds, a 12% increase from the previous academic year, to help support 13 faculty-mentored community-engaged research projects involving 38 undergraduate students and 19 community partners. To learn more about project ideas, faculty mentorship, or requirements, contact CCESL at CCESL@du.edu.

7 HOW STUDENTS CAN LEARN TO WRITE GRANT PROPOSALS

DU's Writing Center, located in the Anderson Academic Commons, holds regular workshops to help undergraduate students prepare their grant proposals for any of the above-mentioned funding sources. Workshops will help students develop a research question and methods, understand the feasibility and fit of the project, and write for a general, educated audience. In addition, the Writing Center assists students applying for a Student Scholar Travel Fund grant with workshops and resources on writing an abstract and creating a research poster. Students interested in receiving help in writing funding proposals, or in preparing for academic presentations, should contact the Writing Center at wrc@du.edu.

8 CONCLUSION

A central feature of the University of Denver research experience is the faculty-mentored culture of inquiry concerned with real-world issues, ideas, and questions, often providing a rich and intellectually stimulating experience for many undergraduate students. Corinne Lengsfeld, Ph.D., Senior Vice Provost for Research and Graduate Education, stated that, "Undergraduates surveyed point to study abroad and undergraduate research as the two most transformative co-curriculars in their career at DU. I strongly encourage students to explore undergraduate research as a way to apply their knowledge to impactful problems."

Undergraduate research, like most research, requires monetary support. Costs associated with supplies, student stipends, travel, and conference presentations quickly add up. Throughout this article, we have highlighted various funding sources DU undergraduates have access to as they pursue academic research and scholarly community engagement projects. We encourage students to work with their faculty mentors to take advantage of these funding resources.