

URCA

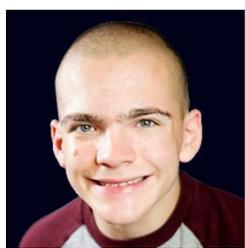
Undergraduate Research and Creative Activities

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*URCA Associate,
Jennifer Roberts
working diligently on
her URCA project*



*URCA Assistant,
Nicholas Kirkpatrick*



*URCA Assistant,
Maryam Molki*

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WHAT IS URCA?

URCA is a program designed to get undergraduate students more involved in research and creative activities. There are two ways in which students can participate in URCA: as Associates and as Assistants.

Associates: These are year-long positions in which a student designs his or her own research or creative activity project and then works with a mentor to see it through. Associates are required to attend monthly meetings and to present their scholarly work at the Spring Symposium. Associates earn a stipend and can also receive money for project-related equipment and travel. Only a maximum of 10 students are accepted into this program each year.

Assistants: These are semester-long positions in which students assist faculty with their research or creative activities. Up to 80 students each semester receive a stipend for being Assistants; however, each semester several students also participate as unpaid Assistants. It is also possible for Assistants to earn course credit for their participation.

URCA Students Offered Unique Enhanced Communication Training Opportunity through the School of Engineering

This spring, URCA Assistants in the School of Engineering have been offered an opportunity to advance their professional communication skills through an initiative led by [Dr. Jenna Gorlewicz](#), [Dr. Gunes Ercal](#), and [Dr. Nicole Gugliucci](#). Partnering with The Center for STEM Research, Education, and Outreach and being funded by an Excellence in Undergraduate Education grant, this project aims to train undergraduate engineering researchers to be better communicators of technical information to academic, industry, and general population audiences. These students will partake in a series of workshops and then actually present their work to various audiences. URCA Assistant [Nicholas Kirkpatrick](#) had this to say about the program: "To me, it's a great way to practice communicating difficult ideas in a low stress environment. I think this is a great program which makes us stand out from other schools."

Through the Eyes of an URCA Assistant

[Maryam Molki](#), an URCA Assistant for [Dr. Michael Crider](#) speaks on her experiences as an URCA Assistant: "As a pharmacy student, I believe that it is essential for pharmacists to have a thorough understanding of drug research and development. The URCA experience not only allowed me to develop such an understanding, but it also increased my interest and appreciation for scholarly research. I am grateful that the URCA program provided me with an opportunity to work with a mentor whose continued enthusiasm, dedication, and patience for student learning and development has helped me to advance my education."

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"The URCA program is a great way to get a taste of what a particular field has to offer. For me, working with a mentor has been one of the most rewarding experiences I've had at SIUE. The professors here are a great resource, and research provides an amazing opportunity to learn more than class can provide."

~ URCA Associate, Jeffrey Borwey



URCA Assistant,
Kaylee Poole



URCA Assistant,
Andrew Seija

Featured Associate: Jeffrey Borwey

Mentor: [Dr. Gunes Ercal](#), Department of Computer Science

Jeffrey's URCA project is largely an extension of the work that he has been doing with Dr. Ercal for about the past year. The project is focused around a 'graph resilience' measure that Jeffrey, Dr. Ercal, and her team have developed called Vertex Attack Tolerance (VAT). Currently, a paper on VAT has been accepted for presentation at the annual Florida Artificial Intelligence Research Society (FLAIRS) conference, and a manuscript has also been submitted for publication.

Jeffrey says that "the URCA program in general has been a great experience" and that it has "opened my eyes to the world of research." Jeffrey also says that working with his mentor has expanded his interests into fields that he wouldn't have otherwise explored. As an URCA Associate Jeffrey has experienced various opportunities that he believes will be beneficial in the future: "My experience in practical research has been very desirable to employers and likely graduate programs." In fact, at present Jeffrey has accepted a position in Research and Development at National Information Solutions Cooperative (NISC), an information technology company. He plans on continuing his education, working towards his Master's degree with a specialization in Machine Learning, and is considering pursuing a doctoral degree as well.

Featured Assistants: Kaylee Poole & Andrew Seija

Mentor: [Dr. Joshua Wooten](#), Department of Kinesiology and Health Education

Congratulations to URCA Assistants Kaylee Poole and Andrew Seija, who recently attended the annual American College of Sports Medicine-Texas Chapter Meeting in Austin, Texas. Kaylee and Andrew are both recipients of the FASEB MARC Travel Award, which they used to attend and present their original research posters at the conference. Both Kaylee and Andrew were selected as finalists in the 'Undergraduate Research Project' category, where Kaylee was awarded 3rd place overall. Andrew was also awarded 'Undergraduate Major of the Year'. Dr. Wooten stated that "both Kaylee and Andrew have worked extremely hard in the lab this year under the URCA Program and they are excited to share their research with the scientific community."

Kaylee's project focuses on investigating the effects of physical activity on hepatic lipid metabolism during weight loss. Kaylee had this to say about participating as an URCA Assistant: "Participating in URCA is one of the best decisions I have ever made. By participating in URCA, I have gained valuable knowledge, experience, mentors, and friends that I will use and consult with for the rest of my life!" After graduation, Kaylee plans on attending the School of Pharmacy here at SIUE. Andrew's project focuses on the potentially therapeutic role that physical activity has on inflammation in the liver during recovery from liver disease. On his experience as an URCA Assistant Andrew says, "The URCA experience has been instrumental to my maturation both professionally and as a student. If given the opportunity to be involved in URCA, I highly recommend any student give it a shot." After graduation, Andrew plans on enrolling in a physical therapy program or in the Exercise Physiology Graduate Program here at SIUE.