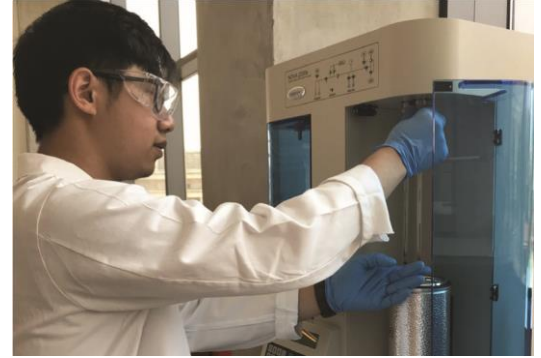


# Molecular Engineering Materials Center (MEM-C) Summer REU Programs

MEM-C aims to accelerate the development of future energy conversion, information processing, and sensing technologies through design, discovery, processing, and application of complex electronic and photonic materials.

The summer REU program is focused on exposing veterans and under-represented minorities in STEM to a viable and relevant career pathway focused on materials and energy research.

## Research Experience for Undergraduates June 17- August 16, 2024



### For: Students who have Completed their First Year of College

A nine-week immersive research project in a single lab leading to an abstract and poster.

- You will work with a graduate student and faculty to develop a research project, gain training in relevant techniques and instrumentation, collect data and produce a poster and research abstract.
- Students participate in a weekly seminar on undergraduate research covering research ethics, writing a research abstract, making a scientific poster.
- Students are expected to work in their designated laboratory 40 hours per week for 9 weeks and complete an academically appropriate research project designed in conjunction with their advisor.
- By the end of the nine-week session, students are expected to complete an abstract or summary of their work, a poster, and a presentation.
- Other assignments may be required.
- This session provides a stipend of \$6,180, on-campus housing, and allowances for food and travel to campus.

### PROGRAM GOALS

- Encourage students to pursue STEM careers.
- Provide exposure to research at a hands-on level.
- Improve student knowledge about the nature of research including ambiguity, evolving understanding, and open endedness.
- Develop student skills in: formulating research questions, designing experiments, analyzing data, communicating results, and planning future steps.
- Learn about relevant, state of the art content in future energy conversion, information processing, and sensing technologies through design, discovery, processing, and application of complex electronic and photonic materials.

### IMPORTANT DATES

- Applications open: December 15, 2023
- Application deadline: February 15, 2024
- Apply online at:  
<https://uwmemc.org/undergraduates/reu/>
- Program starts June 17, 2024

### For: First-Generation Students Transferring to UW

Through our *First-Gen Fast Track* program, we welcome first-generation students transferring to UW who identify as BIPOC into research labs the summer before their first year at UW.



# Materials Research Summer Program

## Program Overview

MEM-C will prepare today's science and engineering students to be tomorrow's diverse cadre of technology innovators and leaders in industry, national laboratories, and academia. The summer REU program is focused on exposing under-represented minorities and veterans to a viable and relevant career pathway focused on materials and energy research.

Our focus is materials resilience and innovation. Undergraduates including veterans will find the research topics are both challenging and relevant to their experience. How can we provide mobile, lightweight and inexpensive energy sources to our forces and to the communities they work with? How can materials research lead to new electronics that are super miniaturized, low energy consumption and reliable? How can new kinds of sensors be used to improve safety, efficiency, and effectiveness?

MEM-C REU is a multidisciplinary program offering research experiences in a variety of scientific disciplines including chemistry, physics, materials science and engineering, and electrical engineering.

Participants may select research projects across a broad range of topics and research areas. Students explore the development of new molecules for development of future energy conversion, information processing, and sensing technologies through design, discovery, processing, and application of complex electronic and photonic materials. Other labs work on integrating these new materials into devices at both the nano- and macro-scale.

Students will also participate in University of Washington undergraduate research seminars, social activities, and field trips that provide them with networking and learning opportunities. These activities include technical content and career seminars, as well as workshops designed to teach students how to effectively present scientific research. Some students may be eligible to receive academic credit and be provided with the opportunity to attend professional conferences to share their work and learn from others.

By the end of the summer, students will be familiar with lab research and the technical, social, and cultural skills necessary to succeed in industry and academia. Students research activities may include literature search, experimental design, bench work, lab notebook management, mathematical modeling, instrumental characterization, computer/software control and analysis, and lab safety. They will also develop communication, organization, and interpersonal skills.

