

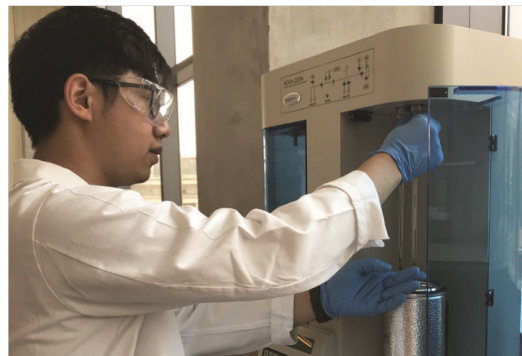


Molecular Engineering Materials Center (MEM-C)

Summer REU and RET 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 participants to a relevant career pathway focused on materials and energy research. Women, veterans, and students from communities historically underrepresented in STEM are encouraged to apply.



Research Experience for Undergraduates

June 20 - August 18, 2023

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 \$6,000, on-campus housing, \$600 for food, and a travel allowance.

Research Experience for Teachers

For: High School or Middle School Teachers

A research experience designed for teachers to support the integration of materials research into their curriculum. Timing and schedule flexible. Teachers receive an \$8,000 stipend.

Materials ALVA

June 20 - August 18, 2023

For: Incoming UW Freshmen

Lab research combined with a rigorous math and chemistry enhancement. Includes stipend, housing.

<https://uwmemc.org/education/programs/alva/>

PROGRAM GOALS

- Encourage students to pursue STEM careers.
- Provide exposure to research at a hands-on level.
- 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, 2022
- Applications close February 15, 2023
- Apply online at:

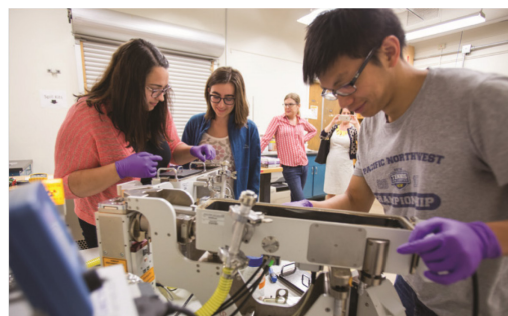
<https://uwmemc.org/education/programs/reu/>



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 participants to viable career pathways focused on materials research. Women, veterans, and students from communities historically underrepresented in STEM are encouraged to apply.



Our focus is materials resilience and innovation. Participants will find the research topics 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 poster presentation 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. 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.

Research Experience for Teachers - Applications due February 15

Teachers will participate in state-of-the-art research in one of our labs and translate the experience into lessons or curriculum they can use in their classrooms. Open to high school and middle school teachers. Applications require:

- A personal statement of 250 words. This should address how this research experience contributes to your career goals, why you are prepared to be successful, and what research focus interests you the most?
- A list of 3 MEM-C Labs or Faculty with whom you would like to work.
- An updated resume with education, training and work experience.
- Two professional references.

