



OAK RIDGE NATIONAL LABORATORY

Hub & Spoke Program's First **Research Experience for Undergraduates (REU) Program—Summer 2023**

Building a Sustainable Future

The **Hub & Spoke Program** is a collaborative initiative between the Manufacturing Demonstration Facility (MDF) at Oak Ridge National Laboratory (ORNL) and the Advanced Structures and Composites Center (ASCC) at the University of Maine. The collaborative research performed between these two world-class research facilities focuses on forest-derived bioproducts with an emphasis on large-scale additive manufacturing. This Research Experience for Undergraduates (REU) program is designed to provide an opportunity for 12 highly qualified undergraduate students to participate in a ten-week research experience at either ORNL or the University of Maine.

Eligibility/Key Info:

- Current undergraduate in sophomore or junior year
- Minimum GPA of 3.0
- U.S. Citizen or permanent resident
- Must have valid passport or real ID
- Must have proof of full COVID-19 vaccination
- Available May 28–August 4, 2023
- Women, minorities, and students with disabilities are strongly encouraged to apply
- Application deadline: March 1, 2023 (or until all positions are filled)

Support Provided:

- \$6,500 stipend + lodging during the program
- Travel to and from home location / Orono, ME / Knoxville, TN
- Half of the students will be working primarily at The University of Maine (Orono, ME) and half will be working primarily at Oak Ridge National Laboratory (Knoxville, TN)
- Students will visit facilities in Tennessee and Maine during the program



Benefits & Activities:

- Access to state-of-the-art research facilities and equipment
- Mentorship in research by world-class scientists/engineers
- Technical writing and oral presentation opportunities
- Ethics in research workshop
- Professional field trips/industrial tours
- One week research experience at Oak Ridge National Laboratory

Potential Research Topics:

- Feedstock production and modification
- Sustainable materials development & characterization
- Large scale additive manufacturing
- New product development
- Technoeconomic analysis and life cycle analysis

Preferred Disciplines:

- Material Science/Polymer Science
- Bioenergy
- Bioengineering
- Chemical Engineering
- Bioproducts/Biomaterials
- Chemistry
- Environmental Engineering
- Wood Science and Technology/Forest Products/Forest Operations



3D-printed bio-based house

Contacts

for Logistical Questions/Concerns:

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