

Opportunity Title: Bioleaching Internship Summer 2021

Opportunity Reference Code: DOE-MSIPP-21-1-INL



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Organization U.S. Department of Energy (DOE)

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- How to Apply**
- Completion of all required fields in the application and successful application submission
 - Undergraduate or graduate transcripts as appropriate
 - Two recommendations

If you have questions, send an email at MSIPPInternships@ornl.gov. Please include the reference code for this opportunity in your email.

For Technical information, contact David Reed at David.Reed@inl.gov.

Certification:

I certify that I am at least 18 years of age and a US citizen, and am currently enrolled as a student in a degree seeking undergraduate or graduate program in a STEM field at an accredited Minority Serving Institution (MSI).

Application Deadline 1/29/2021 11:59:00 PM Eastern Time Zone

Description The Minority Serving Institutions Partnership Program (MSIPP) Internships is a new program to promote the education and development of the next generation workforce in critical science, engineering, technology, and math (STEM) related disciplines that complement current and future missions of DOE national laboratories. The MSIPP Internship program is designed to provide an enhanced training environment for next generation scientists and engineers by exposing them to research challenges unique to our industry.

MSIPP Interns will be given the opportunity to complete Summer Internships aligned with ongoing U.S. Department of Energy Office of Environmental Management (DOE-EM) research under the direction of a host national laboratory. The internship will be performed at the host national laboratory, utilizing their facilities and equipment under the guidance of a research staff member.

Minority Serving Institutions are institutions of higher education enrolling populations with significant percentages of undergraduate minority students.

Project: Idaho National Laboratory is seeking a University sophomore that has completed at least 60 credits. The increasing demand for critical metals in electronics and clean energy technologies requires the development of sustainable extraction and recovery processes. Bioleaching is a sustainable process that relies on the ability of microbes to produce acids to solubilize and release elements from a solid matrix for recovery. The student will assist in growth of microorganisms with agriculture, food and municipal solid waste materials. They will characterize the biolixiviants produced and conduct bioleaching

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activities. They will learn skills needed by scientists and engineers for the development of profitable industrial processes, such as primary literature evaluation, data interpretation and assimilation, modeling, and preparation of figures for peer reviewed publication. They will also learn general laboratory skills by assisting with the execution of experiments. Effective verbal and written/graphic communication of research objectives, methods and results are expected. Understanding of Excel is essential.

Salary: Selected candidate will be compensated by either a stipend or salary, and may include one round trip domestic travel to and from the host laboratory. Stipends and salaries will be commensurate with cost of living at the location of the host laboratory. Housing information will be provided to interns prior to arrival at the host laboratory, and will vary from lab to lab.

Qualifications Eligible applicants must:

- Be a citizen of the United States,
 - Be at least 18 years of age,
 - Currently enrolled as a full-time undergraduate or graduate student at an accredited Minority Serving Institution, <https://orise.ornl.gov/msipp/documents/approved-msi-school-list.pdf>,
 - Working toward a science, technology, engineering, or mathematics (STEM) degree,
 - Have an undergraduate or graduate cumulative minimum Grade Point Average (GPA) of 3.0 on a 4.0 scale, and
 - Pass a drug test upon selection to participate in the MSIPP
- *The process and timing for drug testing varies from lab to lab. Use of Marijuana/Cannabis or its derivatives if prescribed is legal in some states. However, having these drugs in your system is NOT legal at United States Federal Contractor sites and National Laboratories.

Required Knowledge, Skills, Work Experience, and Education

Successful candidates will:

- Be a rising junior or senior undergraduate student studying microbiology, biochemistry or chemistry.
- Have the ability to complete a scientific literature review on subject of study.
- Have skills and maturity to operate advanced laboratory instruments, perform experiments, analyze data, and maintain records in the environmental biotechnology laboratory.
- Have ability to follow all laboratory safety rules and procedures.

Desired Knowledge, Skills, Work Experience, and Education

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It is desirable for the candidate to have:

Recommended degrees: Biology, Chemistry, Bio-engineering

**Eligibility
Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Currently pursuing a Bachelor's Degree.
- **Overall GPA:** 3.00
- **Academic Level(s):** Post-Associate's or Undergraduate Students.
- **Discipline(s):**
 - **Engineering** (4 👁)
 - **Environmental and Marine Sciences** (1 👁)
 - **Life Health and Medical Sciences** (1 👁)

Affirmation

Certification:

I certify that I am at least 18 years of age, a US citizen, and currently enrolled as a student in a degree seeking undergraduate in a STEM field at an accredited Minority Serving Institution (MSI). Click [here](#) to verify that you are enrolled at a current MSI.