

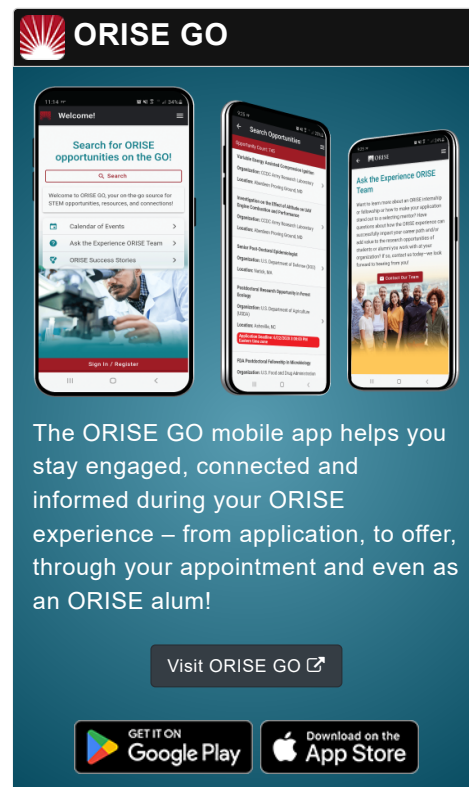
Opportunity Title: Summer Intern, Particle Size Analysis
Opportunity Reference Code: DOE-MSIPP-18-12-SRNL

Organization	U.S. Department of Energy (DOE)
Reference Code	DOE-MSIPP-18-12-SRNL
How to Apply	<p>A complete application must include the following to be considered:</p> <ul style="list-style-type: none"> • Completion of all required fields in the application and successful application submission • Undergraduate or graduate transcripts as appropriate • Two recommendations <p>If you have questions, send an email to Kerri Fomby at kerri.fomby@orau.org. Please include the reference code for this opportunity in your email.</p> <p>For technical questions, please contact Vivian Cato at vivian.cato@srnl.doe.gov.</p>
Application Deadline	1/12/2018 11:59:00 PM Eastern Time Zone
Description	<p>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.</p>

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: This project is to establish a correlation between particle size measurement using an industry standard particle size analyzer and microscopy combined with image analysis. Initially work will begin with a particle size standard and may progress to more real-world examples, depending on how the project progresses. The first step would be sample preparation for microscopy to determine how to prepare samples for microscopy in a way that allows for image analysis. This will be an iterative process, depending on the ability to prepare a sample and develop results from that sample. At a minimum, the

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intern will be exposed to image analysis and sample preparation for microscopy. The intern will take microscopy images and analyze them using image analysis software. The image analysis results will build a particle size distribution that will be compared to that measured by the industry standard particle size analyzer. We anticipate that the methods may not correlate exactly and are trying to determine what the differences are as a particle size instrument is much quicker at developing a particle size distribution, but does rely on many assumptions built into the model, while microscopy does not rely on any models, just statistics. At the end of the internship, the intern will generate and present a poster on the work he/she performed.

Location: This internship will be located at Savannah River National Lab.

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.

Application Deadline: January 12, 2018

Expected Start Date: The program is 10 weeks in duration, starting May 21, 2018. Start date is flexible based on laboratory and candidate availability.

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, <http://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.

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Required Knowledge, Skills, Work Experience, and Education

Successful candidates will:

- Be a current undergraduate or graduate student pursuing a degree in chemistry, physics, or a closely related field.

Desired Knowledge, Skills, Work Experience, and Education

It is desirable for the candidate to have:

- Completion of instrumental coursework and/or analytical instrument experience and/or scientific programming and/or introductory statistics.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Currently pursuing a Bachelor's Degree or Master's Degree.
- **Overall GPA:** 3.00
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (12 👁)
 - **Physics** (16 👁)

Affirmation

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).