



September 06, 2022

Mini-Semester Program Announcement

To: Administrators/Professors/Science Department Chairs

We would like to request your help in selecting students to participate in an extraordinary experience in a one-week program at Brookhaven National Laboratory.

About Brookhaven National Laboratory

Brookhaven National Laboratory delivers discovery science and transformative technology to power and secure the nation's future. Among Brookhaven Lab's current initiatives are nuclear science, energy science, data science, particle physics, accelerator science and technology, quantitative plant science, and quantum information science. For more information [visit our page](#).

Subject: 2023 WDTS Mini-Semester

Brookhaven National Laboratory (BNL), Office of Educational Programs (OEP) seeks applicants for the Workforce Development for Teachers and Scientists (WDTS) Mini-Semester Program. Selected students are invited to participate in a five-day, in person, program developed to introduce participants to the science and engineering being done at BNL. The 2023 WDTS Mini-Semester program will be held on **January 09 - 13, 2023**. This year we will be hosting two tracks, a NSLS-II Life science track and an Engineering/Technical track. Students will be able to select which track they want to participate in.

Please note the 2023 Mini-Semester is planned to be hosted onsite. If COVID 19 restrictions change and onsite access is restricted, the program will be virtual. We will inform all accepted students of the way we will conduct the program prior to the start date.

Program:

The program will be conducted by BNL researchers and will operate from 8:30 a.m. - 5:00 p.m. Eastern Time for five days. It will expose students to the wide range of research projects conducted at BNL, help them to understand different pathways to scientific careers, and develop networking opportunities with the BNL scientific community and Laboratory administrators. The program format will include orientation, classroom instruction and workshops, tours of research facilities, BNL based literature research assignments, interviews with scientists and engineers, group presentations, scientific lectures, and safety overviews. First-hand reinforcement of concepts learned will be supported and enhanced by BNL researchers and technical staff.

- **2023 Program Tracks:**

NSLSII - Life Science

The goal of this weeklong program is to introduce students to the research and applications at Brookhaven Lab User Facilities, the National Synchrotron Light Source II (NSLS-II), and the Center for Functional Nanomaterials (CFN). Through hands-on modules, lectures, and demonstrations, participants will learn about the techniques widely used at the facilities, methods of data collection,

and data analysis. Also, students will learn how to access these state-of-the-art user facilities at Brookhaven National Laboratory and become the next NSLS-II and/or CFN user.

Technical/Engineering

This hands-on workshop will teach the fundamentals of programming microcontrollers to automate the acquisition and analysis of experimental data from scientific instruments. Modern science is critically dependent on the precision and reliability of control systems, built and maintained by engineers and technicians. Participants will write Python code to drive a variety of electronic sensors using real-time feedback algorithms with transfer functions modeled upon actual experiments at BNL. Additionally, students will operate software-based function generators, oscilloscopes, and spectrum analyzers to perform advanced signals analysis in mechanical and electrical engineering domains.

Eligibility:

This program is designed for women and underrepresented groups in STEM. As per the Department of Energy, underrepresented groups include Hispanics, African Americans, and Indigenous peoples (<http://energy.gov/articles/introducing-minorities-energy-initiative>). **Applicants must be U.S. citizens or legal permanent residents** and enrolled full time at their college/university. Eligible students must be majoring in a STEM discipline and have demonstrated strong abilities and interest in STEM. **A minimum GPA of 3.0 is required.**

- Students accepted into the 2023 Mini-Semester will be required to complete a WDTS DOE internship application for summer 2023.

Housing & Transportation:

BNL will provide housing and round-trip travel reservations for accepted candidates.

Application Procedure:

1. Please distribute the accompanying flyer and/or the following link to your qualified candidates <https://surveys.external.bnl.gov/n/WDTSMiniSemesterApplication.aspx>
2. Students must complete an essay identifying three (3) BNL scientists, their research areas and why the student is interested in those scientist and research areas.
 - Essays should have an opening paragraph, body paragraph, and a closing/conclusion paragraph.
 - Your assistance in reviewing the student essays prior to submission would be appreciated.
3. Students must provide a faculty recommendation. Upon completion of their application the student will receive a unique link that they will then forward to their selected faculty recommender.
 - Only one recommendation is needed.
 - If a freshman has no GPA they will be required to submit two (2) letters of recommendation.
4. Students that are accepted into the program will then have to complete additional OEP requirements as directed (such as completing a DOE summer internship application). Students that do not complete all OEP requirements on time will be disqualified from the program.

Application Deadline: October 23, 2022 @ 11:59pm (ET)

Recommendation Deadline: October 26, 2022 @ 11:59pm (ET)

Student Notification By: November 7, 2022

College/University Responsibility:

We solicit your assistance in recommending highly qualified students for the program. To help ensure a smooth application and selection process, we recommend that you assist recommended students in meeting the necessary deadlines. Please feel free to contact me if you have any questions regarding the program

(sgonzalez@bnl.gov).

DOE Internship Opportunities:

We are also proud to host internship opportunities for undergraduate students in our Science Undergraduate Laboratory Internship (SULI) and the Community College Internship (CCI). Both offer a longer-term research internship, 10 weeks in summer and 16 weeks in fall and spring. These opportunities are open to all students. We highly encourage all your recommended students to apply to the appropriate internship opportunities.

SULI (4-year college/universities) please visit: <https://science.osti.gov/wdts/suli/How-to-Apply>

CCI (community colleges) visit: <https://science.osti.gov/wdts/ci/How-to-Apply>

Note that the 2023 summer internship deadline is on January 10, 2023.

Thank you for your cooperation and continued support.

Sincerely,

Salvador A. Gonzalez

Salvador A. Gonzalez

Office of Educational Programs

Brookhaven National Laboratory

sgonzalez@bnl.gov

631.344.4521

www.bnl.gov/education