Savannah River Environmental Sciences Field Station - 2023

Engineering Program

The Savannah River Environmental Sciences Field Station (SRESFS) seeks to increase recruitment and retention of Minority Serving Institution students in science, engineering, cybersecurity, and environmental career professions. Coursework and extensive interactions with Savannah River National Laboratory (SRNL) scientists and engineers emphasize current mission driven areas of the Department of Energy (DOE) Environmental Management Office and introduce students to the work environment of a National Laboratory. Courses are held at the University of South Carolina Aiken (USCA) and the Savannah River Site (SRS). Apartment-style housing is provided on the USCA campus. This course-driven summer program provides education and research opportunities that will prepare you for graduate and professional careers in the areas of environmental science and engineering and management of natural resources.

BENEFITS INCLUDE:

- Stipend of $3000/session
- Tuition and fees
- Housing accommodations
- Course work, field experiences, and laboratory work related to environmental engineering.
- Course credits that may transfer back to your home institution

ELIGIBILITY:

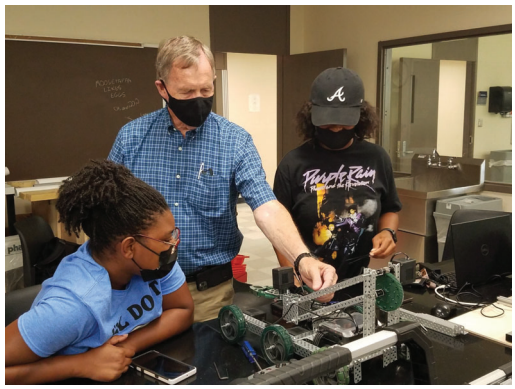
- ✓ Students must be rising Juniors or Seniors attending a Minority Serving Institution with a 2.5 GPA or better.
- ✓ Participants must be U.S.citizens.

Interns pose in front of plaque commemorating the closure of H and F Tank Farm Tanks at Savannah River Site as part of their class visit to the site

TO APPLY:

Submit an application at: https://sresfs.net
Applications accepted through March 15, 2023.

PROGRAM APPLICATION QUESTIONS? *Email Chris Walker at cwalker3@scsu.edu*
ENGINEERING QUESTIONS? *Email Dr. Bill Pirkle at billp@usca.edu*



Robotics instructor assisting interns

ABET ACCREDITED ENGINEERING COURSES:

Session I (Late May - Late June)
Instrumentation, Measurements, and Statistics (3 credits) Principles of measurement, analysis of data, experimental planning. Correlations of experimental data, experimental variance, and uncertainty analysis. Prereq: Mechanics, Physics I, or equivalent.

Engineering Materials (3 credits) Structure and properties of engineering metals, ceramics, and polymers; atomic bonding, crystalline structures and microstructures; mechanical behavior and deformation mechanisms; processes for controlling structures and properties; corrosion. Prereq: Mechanics.

Session II (Late June - Late July)
Topics in Engineering: Introduction to Robotics, Remote Systems, and AI Applications (3 credits) Fundamentals of robotic and tele-operated autonomous devices and AI of both fixed and mobile configuration, and the application of technologies including nuclear environments. Design concepts, perception, sensors, computer vision, navigation, position sensing, actuation, manipulation, mobility and intelligence. Prereq: Intro to Circuits.

Engineering Research Methods in Environmental Management (3 credits) Design, collection and analysis of data, scientific writing, literature review, methods for presenting findings and an overview of research methods including experimental and non-experimental and the review and integration of each approach. Prereq: Junior standing.

SAVANNAH RIVER ENVIRONMENTAL SCIENCES FIELD STATION