

Savannah River Environmental Sciences Field Station - 2023 Cybersecurity Program



The Savannah River Environmental Sciences Field Station (SRESFS) seeks to increase recruitment and retention of under-represented students in science, engineering, cybersecurity, and environmental science career professions. Coursework and extensive interactions with Savannah River National Laboratory (SRNL) scientists and engineers emphasize the current focus areas of the Department of Energy (DOE) Environmental Management Office and introduce interns 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 cybersecurity program provides an introduction to cybersecurity, its real-world applications in a National Laboratory environment, and will help you determine whether a career in cybersecurity is for you.



Poster Day for Interns at Savannah River National Laboratory

BENEFITS INCLUDE:

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

ELIGIBILITY:

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



Students pose in front of Applied Research Center after Poster Session

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

PROGRAM QUESTIONS? Email Dr. Bill Pirkle at billp@usca.edu



SAVANNAH RIVER
ENVIRONMENTAL SCIENCES
FIELD STATION

CYBERSECURITY COURSES FOR 2023 VALIDATED BY THE U.S. NATIONAL SECURITY ADMINISTRATION

Session I (Late May - Late June)

Fundamentals of Digital/Computer Forensics (3 credits) Fundamentals of computer forensics and investigations. Historical and current computer forensic and investigative security issues; a systematic approach to computer investigations; digital forensics, email, and image file analysis; and guidelines for investigation reporting.

Introduction to Information Security (3 credits) Introduction to basic security concepts and principles of information security. History of information security; overview of system security, software security, and network security; and security management.

Session II (Late June - Late July)

Introduction to Cryptography (3 credits) Fundamental topics in cryptography, including symmetric cryptography, historical ciphers, the data encryption standard, the advanced encryption standard, and asymmetric cryptography. Also, topics in number theory for public-key cryptography, the RSA cryptosystem, and the RSA digital signature scheme.

Introduction to Legal and Ethical Issues in Cybersecurity (3 credits) Legal and ethical aspects of cybersecurity. Ethics, privacy, laws, usability security, cybercrime and the social, psychological and cultural aspects of cybercrime. Emphasis is on the theoretical as well as the practical aspects of issues.