

CYBERSECURITY

DEPARTMENT OF COMPUTER SCIENCE
COLLEGE OF ENGINEERING AND SCIENCE



MAJORS

Cybersecurity (BS) with concentrations in:

- Secure Software Development
- Security Governance

MINOR

- Cybersecurity

WHAT CAN I DO WITH A CYBERSECURITY DEGREE?

As global businesses and society continue to revolve around highly complex computing and information technology systems, cybersecurity workloads and attacks are increasing faster than professionals can meet the demand. The need for cybersecurity is of paramount importance for protecting critical infrastructure and computer networks from cyber-attacks by foreign nations, criminal groups, hackers and terrorist organizations. A degree in cybersecurity from Slippery Rock University prepares students for careers in a wide array of fields including information security, network management, secure software development, software assurance and security governance.

Graduates will be able to pursue a variety of career options, including:

- Computer system analysts
- Information security analysts
- Computer programmers
- Software developers
- Computer network specialists
- User support specialists

CYBERSECURITY AT SRU

The cybersecurity curriculum facilitates and prepares students with all-inclusive knowledge of advanced, practical and secure coding practices for software and data applications in cybersecurity domains. Students will be exposed to a comprehensive coverage of diverse and interdisciplinary topics including: network administration, cryptography, software assurance, secure coding, security tools, security analysis, project management, incident response, automation, data science and data analytics, process automation, post-mortem deep forensics, ethical reasoning, malware behavior and analysis.

WHY CHOOSE CYBERSECURITY AT SRU?

- 1. Multidisciplinary:** Our cybersecurity program encompasses classes within specific academic departments as well as liberal studies curriculum.
- 2. Unique:** SRU offers a specialized cybersecurity degree program concentrating on secure software development and security governance. Concentration in secure software development trains students to design and implement a secure, robust, and quality software system to enhance confidentiality, integrity, and availability of data and services. Concentration in security governance trains students for enterprise risk analysis, compliance, system analysis, monitor and deploying secure systems.
- 3. Project-based and Research-Driven Program:** Students have numerous opportunities to collaborate with faculty in undergraduate research. The Center for Cybersecurity and Advanced Computing at SRU facilitates many collaborative research opportunities focusing on cybersecurity, ethics, social engineering and emotional intelligence models and and trustworthy computation and security protocols that students should know and be able to apply independently.
- 4. Support and guidance:** Every undergraduate is assigned an academic adviser within the department to guide them through their program of study and help them make decisions about educational and career goals.
- 5. Resources:** The faculties and undergraduate students are supported in classes and researches by computational resources such as on-demand Windows or GNU/Linux virtual machines on Azure Cloud, high-end PCs, Raspberry Pies, smartphones, high-speed networking lab, Internet of Things (IoT) training kits, Lego/Furhat/Pepper Robots, and high-performance computing (HPC) platforms, among others. Also, the department has a collaboration with Pittsburgh Supercomputing to use their equipment for both undergraduate classes and research.

SlipperyRock
University

A member of Pennsylvania's State System
of Higher Education

EXPERIENCE THE DIFFERENCE

www.sru.edu

INTERNSHIP OPPORTUNITIES

Students have completed internships at various locations including:

- Software Engineering Institute (CMU)
- Dark Rhino
- Butler Health Systems
- Westinghouse
- Intalere
- Treloar & Heisel
- Alteryx
- PNC Financial Services
- Lawrence Berkeley National Laboratory
- National Cyber-Forensics and Training Alliance
- SherTech, LLC
- Mitsubishi Electric Power Products Inc
- E-Safe Technologies, LLC
- PNC Bank
- Fiserv, Inc.
- Tractor Supply Co.
- GBU Financial Life

CAREER OUTCOMES

Graduates have secured careers in the following areas:

- Information Security Analyst
- Information Systems Security Officer
- Information Security Risk Analyst
- Malware Analyst
- Data Integration and Risk Management
- Secure Software Developer
- Penetration Tester
- Digital Forensic Examiner
- Information Technology Security Auditor

CLUBS AND ORGANIZATIONS

- Cyberspace Club



STUDENT & ALUMNI SPOTLIGHT

Shane Smith, '23

Fraud Analyst & Technology Development Program Associate, PNC Financial Services

"My time as a student in the Cybersecurity program on the Secure-Software development track has been very fulfilling. I was able to experience and learn about a wide range of content such as network security, malware analysis, data structures, and crucial security principles. Some of my favorite things about the program were the understanding professors who are truly there to help you learn what you need in order to succeed, as well as the ability to allow you to demonstrate your knowledge through many cooperative projects. I am grateful for my time and the professors at SRU that allowed me to break into the start of my career in the tech industry."

Abbigail Rowe, '22

Engineer, Computer and Technology Services, Epic Systems Corporation

"The cybersecurity program at SRU provided me an in-depth exploration of the fundamentals of cybersecurity and computer science. While in the program, I was able to explore topics ranging from AI and robotics to penetration testing and malware analysis. At my job, I rely on the fundamentals to adapt to the ever-changing climate of the internet and its security. The inclusive environment and supportive staff promoted my self-expression and success to obtain a degree and graduate into a full-time position."

DEPARTMENT:

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FOR MORE INFORMATION:

www.sru.edu/majors

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