Bachelor of Science

Dr. Vincent Smith, Program Chair

Cybersecurity Major Mission Statement

Our mission is to prepare students with skills in cybersecurity solutions that enable individuals and organizations to work productively and efficiently in a secure environment. Our mission is achieved using cutting-edge technology and industry best practices to deliver reliable and effective cybersecurity services that meet client needs; we seek to empower individuals with the knowledge and skills they need to protect themselves and their communities from cyber threats.

Program Description

Our cybersecurity program is designed to provide students with comprehensive and effective solutions to protect individuals, businesses, and organizations from cyber threats in addition to the core computer science coursework. Students learn a wide variety of topics such as risk assessments, vulnerability testing, incident response planning, and security training. Our program emphasizes a proactive approach to cybersecurity, focusing on prevention as well as response. The program prepares students to implement robust security measures, including firewalls, intrusion detection systems, and encryption, to reduce the risk of cyber-attacks.

The Cybersecurity major is offered as an in-seat residential program on the Charleston campus*. Students complete a 50-credit computer science core and further coursework in cybersecurity. All CYBR classes will be taken in the online format. Students have the opportunity to double major in Information Technology, Video Game Development, Technology Applications, or Data Science.

Cybersecurity Learning Outcomes

In addition to the Applied Computer Science core learning outcomes, the graduate will:

1. Detect, assess, remediate, and communicate ongoing cybersecurity threats and vulnerabilities.

Cybersecurity Major Courses

In addition to the Applied Computer Science core courses, students must complete the following courses:

Cybersecurity Major Courses		
COSC 310	Software Engineering	3 credits
COSC 430	Cryptology	3 credits
CYBR 100	Intro to Computers (A+ Certification)	3 credits
CYBR 120	Intro to Security (Security+ Certification)	3 credits
CYBR 320	Ethical Hacking & Countermeasures	3 credits
CYBR 330	Incident Handler	3 credits
CYBR 340	Security Analysis	3 credits
MATH 201	Calculus I	4 credits
MATH 225	Discrete Mathematics	3 credits
	Credits for Cybersecurity:	**28+ 56 (Core) = 84**

Total Credit hours: 120

*Students may be required to complete some courses in online or hybrid formats.

**A low-math path is available for students who are entering below the pre-calculus level.

***MATH 201 requires MATH 123 or Math ACT Score 27 (Math SAT score 640).