ASSOCIATE OF SCIENCE IN CYBERSECURITY MAJOR

Dr. Adam Beatty Program Director

Associate of Science Cybersecurity Program Mission

The mission of the (ASCS) Associates of Science in Cybersecurity provides the problem solving technical competencies and security practitioner skills to defend the security domain as competent members in the field of cybersecurity.

Program Description

The Associates of Science in Cybersecurity is a 2-year, online degree-program that can be taken full time or part time and is designed for entry level students and working adults. Graduates will be prepared to contribute to and lead others in the quickly evolving dimensions of Information Technology (IT) related to cybersecurity. The Program provides opportunities for students to acquire the knowledge, skills, and experience necessary for demonstration of competency in the field of cybersecurity at the associates level.

- Graduates will be prepared to contribute to the evolving dimensions of Information Technology (IT) related to cybersecurity.
- Lab and hands on activities with the use of industry related certification material is utilized throughout the curriculum.
- Graduates will be prepared to conduct the seven main categories of cyber operations as defined by the National Cybersecurity Workforce framework. They will be able to: (1) securely provision, (2) operate and maintain, (3) protect and defend, (4) investigate, (5) collect and operate, (6) analyze, and (7) provide oversight and development. Simplified, graduates will be prepared for a variety of careers in the rapidly growing industry of cybersecurity.
- The <u>National Cybersecurity Workforce Framework</u> and <u>U.S. Department of Labor</u> have identified potential job opportunities for graduates of cybersecurity programs that include, but are not limited to:
 - Information Security Analyst
 - Information Systems Security Engineer
 - o Intrusion Detection System (IDS) administrator, engineer, or technician
 - Network Administrator
 - Computer Crime Investigator
 - Cyber Trainer

Program Outcomes

The graduate will:

- 1. Identify security vulnerabilities, protection methods, and tools to help mitigate security risks.
- 2. Provide input for cybersecurity operational plans for individuals, corporations, governmental services and/or the national community.
- 3. Utilize tools to help detect security risks, threats and vulnerabilities.
- 4. Collaborate with teams to communicate cyber threats and technical

remediation strategies in both verbal and written formats.

5. Integrate technical skills with operational plans to inform organizational security awareness activities, based on proven industry practices, for people, processes, and systems

Curriculum

33 Hours Cybersecurity Major Courses

27 Hours (+/-) Foundational Courses

A.S. Cybersecurity Major Courses (33 credits)*	
Course	Credits
ORGL 150: Intro to Professional Development	3
CYBR 100: Intro to Computers (or A+ Certification)	3
CYBR 110: Intro to Networking (or Network + Certification	3
CYBR 120: Intro to Security (or Security + Certification)	3
CYBR 130: Introduction to Programming	3
CYBR 200: Introduction to Databases	3
CYBR 210: Network Security Architecture	3
CYBR 220: Security Vulnerability Analysis	3
CYBR 230: Offensive Security Exploitation	3
CYBR 240: Security and Data Privacy	3
CYBR 250: Cloud Computing	3
Total	33
Foundational Courses (27 credits)*	
Course	Credits
ENGL 101: Freshman Writing I	3
ENGL 102: Freshman Writing II	3
SPCH 103: Oral Communication Fundamentals	3
ENGL 224: American Literature Survey	3
HIST 211/212: World Cultures I/II	3
SSCI 105: Issues in Social Science	3
HUMN 110: Unheard Voices	3
	5
NSCI 117: Why Science Matters	3
NSCI 117: Why Science Matters MATH 120: Intermediate Algebra	3 3

* Some foundational course requirements may be met with transfer credits; this will vary by student.

Transfer Credit

Undergraduate students enrolled in an undergraduate degree or certificate program must complete at least 25% of the total credits required for the program while in residence at the University of Charleston. The minimum residency requirement for an associate degree is 15 credits. The minimum residency requirement for a bachelor's degree is 30 credits. The minimum residency requirement for a certificate program is 3 credits

Admission Requirements

Students must gain general admission to the University of Charleston.

Additional Requirements

Minimum requirements include:

- Decisions on the acceptance of transfer equivalencies within the major are made by the program faculty;
- 60 earned academic credits;
- Fulfillment of all general education requirements;

15 resident credits;

Fulfillment of all requirements and outcomes of the academic program;

Cumulative University of Charleston grade point average of 2.0; and

Demonstration of achievement of exit-level standard on discipline and program outcomes