

BACHELOR OF SCIENCE IN CYBERSECURITY MAJOR

Dr. Adam Beatty, Program Director

Mission

The mission of the B.S. in Cybersecurity is to prepare graduates with the ability to apply learned skills and experiential knowledge of security technology to make a significant contribution to the information security of individuals, corporations, governmental services and the national community.

Program Description

The Bachelor of Science in Cybersecurity is a 2-year, online degree-completion program that can be taken full time or part time and is designed for working adults who already have some college credit. The B.S. in Cybersecurity has earned specialized business accreditation from the Accreditation Council for Business Schools & Programs (ACBSP). 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 baccalaureate level.

- Graduates will be prepared to contribute to and lead others in the quickly evolving dimensions of technology related to cybersecurity.
- 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 [National Cybersecurity Workforce Framework](#) and [U.S. Department of Labor](#) have identified potential job opportunities for graduates of cybersecurity programs that include, but are not limited to:
 - Information Security Analyst
 - Information Systems Security Engineer
 - Intrusion Detection System (IDS) administrator, engineer, or technician
 - Network Administrator
 - Computer Crime Investigator
 - Cyber Trainer
 - Chief Information Security Officer (CISO)

Program Outcomes

The graduate will:

1. Establish and supervise legal and ethical practices in the cybersecurity arena;
2. Develop and implement a comprehensive cybersecurity strategic plan for individuals, corporations, governmental agencies, or the national community;
3. Detect, assess, and remediate ongoing cybersecurity threats and vulnerabilities;
4. Effectively communicate cybersecurity threats and remediation strategies across organizational levels in both verbal and written formats; and
5. Integrate knowledge, software and hardware capabilities, and threat and vulnerability awareness across varying technology formats, such as operating systems, networking, social media, mobile and handheld devices.

What You Will Study

Students in the Cybersecurity program complete foundational courses (24 credits), Cyber required courses (33 credits), minor selection (18-21 credits), and general electives (45 credits), for a total of 120 credits.

Foundational Courses (24 credits)*

Course	Credits
COMM 101: Freshman Writing I	3
COMM 102: Freshman Writing II	3
SPCH 103: Oral Communication Fundamentals	3
SSCI 105: Issues in Social Science	3
HIST 211 or 212: World Cultures I or World Cultures II	3
HUMN 110: Unheard Voices	3
NSCI 117: Why Science Matters	3
MATH 116 or 120: Intermediate Algebra	3
Total	24

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

B.S. Cybersecurity Major Courses (33 credits)

Course	Credits
CYBR 100: Intro to Computers (or A+ Certification)	3
CYBR 110: Intro to Networking (or Net + Certification)	3
CYBR 120: Intro to Security (or Security + Certification)	3
CYBR 310 Cybersecurity Strategy	3
CYBR 320 Ethical Hacking & Countermeasures (Certified Ethical Hacker)	3
CYBR 330 Incident Handler	3
CYBR 340 Security Analysis	3
CYBR 410 Certified Information Systems Security Professional - Phase I	3
CYBR 415 Certified Information Systems Security Professional - Phase II	3
CYBR 440 Advanced Security Trends	3
CYBR 450 Cybersecurity Capstone	3
Total	33

Minor Electives (18-21 credits)

Organizational Leadership Minor

BUSI 151 Introduction to Business	3
ORGL 309: Collaborative Leadership	3
ORGL 402: Organizational Behavior	3
ORGL 430: Leading Teams: Practicum	3
ORGL 401: The Learning Organization	3
ORGL 406: Organizational Development & Change	3
Total	18

Business Administration Minor

BUSI 151: Introduction to Business	3
ACCT 201: Principles of Accounting I	3
ACCT 202: Principles of Accounting II	3
ECON 201: Principles of Microeconomics	3
FINA 312: Business Finance	3
MGMT 311: Principles of Management	3
MRKT 321: Principles of Marketing	3
Total	21

General Electives

Total credits for program	120
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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 a bachelor's degree is 30 credits.

Admission Requirements

Applicants must gain general admission to the university, have a 60-credit associate degree in Cybersecurity or another technology-related field from a regionally accredited college or university **or** have a minimum of 60 semester credit hours with the primary focus on technology. **The 60 credits must include 9 credits of prerequisite courses or certifications as noted below.** Applicants must have a minimum GPA of 2.0.

Additional Requirements

- Completion of all University of Charleston Foundation Course Outcomes;
- Completion of 120 credits, including transfer credit;
- Completion of 24 credits of Foundational Courses;
- Completion of 33 credits within UC's cybersecurity curriculum;
- Completion of one of the following:
 - 21 credits (seven courses) to complete a minor in Business Administration and satisfy prerequisites for UC's Master of Business Administration (MBA) program; or
 - 18 credits (six courses) to complete a Minor in Organizational Leadership.
 - 45 credits of general electives