# Bachelor of Science in Cybersecurity

## Program Overview

Associate Dean of Continuing Studies: Mark L. Parker
Program Manager: Henry Collier

The Bachelor of Science in Cybersecurity program (BSCS) is a degree-completion program designed for military, government, and private sector professionals who seek to complete their bachelor's degree in the information technology field and who want to further their careers by developing specialized skills in the high-need area of network security. The program offers a solid foundation of cyber security courses as well as two concentration areas of study:

- Computer Forensics and Vulnerability Management
- Information Warfare and Security Management

The cybersecurity curriculum balances general education and core cybersecurity courses (many of which can be fulfilled through transfer credits) with elective and project-based courses that allow students to delve into sub-areas such as national security policy, offensive and defensive information warfare, penetration testing, and malware forensics. All courses are designed to hone foundational skills in critical thinking, research and analysis, ethical decision-making, and oral and written communications.

Students entering the cybersecurity program must transfer a minimum of 30 credits to be admitted to the program and may transfer as much as 84 credits to satisfy the degree requirement. Basic networking, programming and operating systems knowledge acquired through prior coursework, certifications, or military training is required for entry into the degree program.

## Requirements

### Curriculum Requirements

The Bachelor of Science in Cyber Security (BSCS) is designed for students with at least 30 credit hours of prior college coursework or its equivalent in eligible military or professional training. The program consists of three curriculum areas:

- Core Courses
- Concentrations
- Capstone

Students are required to earn a minimum grade of C in core, concentration, and capstone courses.

### Core Courses

| | | |
|---|---|---|
| CJ 341 | Cyber Law and Cyber Crime | 3 |
| COMM 301 | Business & ProfessionalWriting | 3 |
| CYBR 201 | Fundamentals of Computer Networking | 3 |
| CYBR 210 | Computer Programming with a High Level Language | 3 |
| CYBR 215 | Computer Programming with a Low Level Language | 3 |
| CYBR 220 | Windows Server Administration | 3 |
| CYBR 225 | Linux Administration | 3 |
| CYBR 230 | Relational Databases with SQL | 3 |
| IA 340 | Introduction to Information Assurance | 3 |
| IA 342 | Management of Information Assurance | 3 |
| MNGT 309 | Mngt of Organizations | 3 |
| PHLS 210 | Ethics in the Modern World | 3 |
| **Total Cr.** | | **36** |

## Concentrations

Students in the BSCS program are required to complete one of the following concentrations:

### Computer Security Vulnerability and Management Concentration

| | | |
|---|---|---|
| CJ 442 | Introduction to Computer Forensics | 4 |
| CYBR 320 | Vulnerability Testing I | 3 |
| CYBR 420 | Vulnerability Testing II | 3 |
| DF 311 | Network Forensics | 3 |
| DF 312 | Malware Forensics | 3 |
| DF 411 | Cyber Investigation | 3 |
| **Total Cr.** | | **19** |

### Information Warfare Concentration

| | | |
|---|---|---|
| CYBR 370 | Introduction to Information Warfare | 3 |
| CYBR 380 | Offensive Information Warfare | 3 |
| CYBR 382 | Defensive Information Warfare | 3 |
| CYBR 410 | Systems Assurance | 3 |
| CS 407 | Politics of Cyberspace | 3 |
| POLS 302 | National Security Policy | 3 |
| **Total Cr.** | | **18** |

## Capstone

The capstone course is the culminating academic activity for BSCS students. In it, students propose, develop, and deliver a final substantive research project that combines the general knowledge acquired in the core courses with the specific knowledge of the concentration. The final project requires students to draw upon at least two different academic disciplines for research methodology, seminal literature and sources, and intellectual frameworks in order to bring an interdisciplinary perspective to the subject. The capstone course may not be fulfilled through transfer credit.

| | | |
|---|---|---|
| CYBR 400 | Cyber Capstone | 6 |
| **Total Cr.** | | **6** |

## Pre-Program Education and Training

Students accepted into the Cyber Security degree program must have earned a minimum of 30 semester credits from college courses, military training, or other educational experiences such as CLEP tests. A maximum of 90 semester credits may be transferred into the program. Basic networking, programming and operating systems knowledge acquired through prior coursework, certifications, or military training is required for entry into the degree program.

## General Education

Students are required to meet general education competencies (http://catalog.norwich.edu/onlineprogramscatalog/generaleducation/) in writing, literature, history, arts and humanities, science, social science, and math and may do so by transfer credit or enrollment in courses offered through the College of Graduate and Continuing Studies.

## Transfer Credit and Student Progress in the Program

CLEP and DSST exams may be accepted for transfer credit by the program manager, depending on the requirements of the Norwich course for which credit is sought. CLEP and DSST transcripts must be applied to a student's record by the time they have earned 100 credits in their program. No credit derived from CLEP or DSST exams will be applied to the student's record after this point.

Students must complete all core and elective coursework, including any courses necessary to fulfill general education competencies, before being enrolled in a field study course unless given prior written approval by the program manager.

Students must complete all required coursework including any required field study courses before being enrolled in a

capstone course, unless given prior written approval by the program manager.

All transfer credit must be applied to the student's record before the student can be enrolled in a capstone course.

## Faculty

| Faculty Member | Institution at which highest degree was earned |
| --- | --- |
| Henry Collier, MS (Program Manager) | Champlain College |
| Michael D'Ambrosio, MS | National Defense University |
| Matthew Chase, MBA | Nova Southeastern University |
| Jeffrey T. Covington, MS | American Public University |
| Shonn Deyer-Jones, MS | George Washington Univrsity |
| Adam Duby, MS | Nova Southeastern University |
| Chad Dunham, MS | Norwich University |
| Craig Dunham, JD | University of Dayton |
| Scott Fisher, PhD | Rutgers University |
| Sam Ghosh, PhD | university of Maryland College Park |
| Sergio Hernandez, MBA | Pepperdine University |
| Sofia Mohamud, MS | George Mason University |
| Robin Saunders, EdD | Temple University |
| Alexander Vukcevic, MS | Air Force Institute of Technology |
| Keith Wile, MS | Norwich University |
| Michael Winn, MS | Air Force Institute of Technology |