Computer Science Core Curriculum (Bachelor of Science)

Cyber Security / Cyber Operations Career Focus (2020-21)

Aligned with ACM Cybersecurity Curriculum, NSA/DHS Cyber Ops Curriculum and NIST National Initiative for Cybersecurity Education Framework

**Required Core Courses:**

- CS 1300 Discrete Structures (3)
- CS 1400 Introduction to Programming and Problem Solving (4)
- CS 2400 Data Structures and Advanced Programming (4)
- CS 2600 Systems Programming (3)
- CS 2640 Computer Organization and Assembly Programming (3)
- CS 3010 Numerical Methods (3)
- CS 3110 Formal Languages and Automata (3)
- CS 3310 Design and Analysis of Algorithms (4)
- CS 3650 Computer Architecture (4)
- CS 3750 Computers and Society (3, GE B5 or D4)
- CS 4080 Programming Languages (3)
- CS 4310 Operating Systems (3)
- CS 4630 Undergraduate Seminar (1)
- CS 4800 Software Engineering (3)

**GE courses:** BIO 1110/1110L (3), MAT 1140 (4), MAT 1150 (4), PHY 1510/1510L (4), STA 2260 (3).

**Required Elective Core Courses for the Cyber Security/ Cyber Operations career focus**

- CS 2990 Intro to Cyber Security and Forensics (3)
- CS 3800 Computer Networks (3)
- CS 4600 Cryptography and Information Security (3)
- CS 4990 Network and Web Security (3)
- CS 4990 Software Security and Reverse Engineering (3)
- CS 4990 Wireless and Mobile Security (3)
- CS 4610/4620 Senior Project in Cyber Security (1)

*Students completing the Cyber Security/ Cyber Operations Career Focus Electives will receive the PolySec Cyber Warrior Digital Badges.*

*Please e-mail polysec@cpp.edu for more information.*