

CYBERSECURITY PATHWAYS

CYBERSECURITY CERTIFICATES

BSC offers a variety of certificates designed to meet specific and unique occupational needs. Certificates can be stacked toward a diploma, associate or bachelor's degree. Choose from our hands-on Cybersecurity certificates to enhance your career and expand your skillset.

ENTRY-LEVEL

CYBERSECURITY FUNDAMENTALS courses provide an understanding of fundamental cybersecurity, network security, cloud security, SOC security, information security and networking. Students will identify and protect against cyberattacks by understanding the fundamentals, principles and concepts of cybersecurity. They will learn how to create interfaces, security zones, authentication and policies - all for next generation firewalls.

COMPUTER NETWORKING courses provide students with the fundamentals of computer networking, including the practical and conceptual skills needed to enter the industry. Students will gain an understanding of basic networking, build simple local area networks, perform basic device configurations, implement IP address schemes, and configure and troubleshoot routers and switches.

SECURITY AND HACKING courses give students practical experience using security tools on Linux and Windows systems. Courses expand students' knowledge of information security, which will provide them with the principles, technologies and practices to secure computers and networks. Students will gain skills necessary to protect systems and organizations from cyber vulnerabilities and risks.

CYBERSECURITY FUNDAMENTALS

CIS 140	Cybersecurity Foundation
CIS 141	Network Security Fundamentals
CIS 142	Cloud Security Fundamentals
CIS 143	Security Operations Fundamentals
CIS 147	Principles of Information Security
CIS 164	Networking Fundamentals 1

COMPUTER NETWORKING

CIS 164	Networking Fundamentals 1
CIS 165	Networking Fundamentals 2
CIS 212	Windows Operating System Client
CIS 216	Implementing Windows Network Infrastructure
CIS 223	Linux System Administration

SECURITY AND HACKING

CIS 107	Linux Fundamentals
CIS 147	Principles of Information Security
CIS 197	Cooperative Education/Internship
CIS 255	Computer and Network Security
CIS 274	Cybersecurity Operations
CIS 282	Ethical Hacking and Network Defense

ADVANCED

MODERN COMPUTING courses give students opportunities to gain experience installing, configuring, securing, and administering data center services. Instructors will guide students in data center configuration and incident mitigation. Students will also learn the methods, policies and procedures needed to maintain systems availability and response.

OFFENSIVE AND DEFENSIVE SECURITY courses cover digital forensics, installing, configuring and managing firewalls. Students will learn theory and extended configuration features necessary to set up traffic handling, advanced content, user identification and next-generation firewall technologies. Students will also learn network penetration testing to apply cybersecurity defensive skills.

SECURE PROGRAMMING courses give students a background in the Python and Java languages for computer programming. Secure programming classes attempt to ensure that software is protected from vulnerabilities, threats or direct attacks. Students will use a structured high-level language approach to programming, with an emphasis on problem solving and design.

MODERN COMPUTING

CIS 226	Linux Network & Security Administration
CIT 320	Disaster Recovery & Incident Response
CIT 330	Virtualization
CIT 410	Wireless Networking & Mobile Security
CIT 430	Cloud Computing & Security
CIT 397	Cooperative Education/Internship

OFFENSIVE AND DEFENSIVE SECURITY

CIS 241	Digital Forensics Fundamentals
CIT 367	Cybersecurity Infrastructure Configuration
CIT 368	Cybersecurity Prevention & Countermeasures
CIT 470	Penetration Testing
CIT 475	Emerging Threats & Defenses
CIT 397	Cooperative Education/Internship

SECURE PROGRAMMING

CIS 185	Introduction to Programming (Python)
CIS 204	Database Design & SQL
CSCI 160	Computer Science 1 (Java)
CIT 381	IT Project Management
CIT 450	Database & Web Application Security