



Cyber Security

Course Description:

The Cyber Security program is designed to prepare students for the specialty areas of Cyber Security. The Cyber Security program begins first with the entry level courses to provide you with the fundamental skills and concepts required to maintain, support, and work efficiently with personal computers. In addition, you will acquire the essential skills and information you need to set up, configure, maintain, troubleshoot, and perform preventative maintenance of the hardware and software components of a basic personal computer workstation and basic wireless devices. In these courses, you will acquire the essential skills and information you will need to install, upgrade, repair, configure, troubleshoot, optimize, and perform preventive maintenance of basic personal computer hardware and operating systems. You will identify and describe all the major networking technologies, systems, skills, and tools in use in modern networks.

The Cyber Security Program will provide students with the skills that employers seek in high level security positions. This program is designed to take an entry level IT professional working in the network support field and prepare them for the specialty areas of Cyber Security. Completion of the Cyber Security Specialist Program will demonstrate a high level of industry-recognized knowledge and expertise in cyber security. The Cyber Security Specialist Program and related certifications will set CCBST graduates apart from diploma/degree-only graduates and will increase opportunities for employment in the IT field.

Course Outline:

Introduction to Programming

Introduction of Cybersecurity and Information Assurance

Cybersecurity Threats, Attacks, and Defense

Computer Hardware Fundamentals

Computer Network Fundamentals

Administrating Windows

Administrating Windows Server



Introduction to Linux

Active Directory

Network Infrastructure

Course Outcomes:

At the end of the course the student will be able to:

- Gain foundational IT skills in computer hardware, software, and operating systems.
- Develop hands-on programming abilities for real-world problem-solving.
- Understand core cybersecurity concepts including threats, attacks, and defensive strategies.
- Configure and manage Windows and Linux systems for secure operations.
- Install and administer Windows Server environments with Active Directory and DNS.
- Apply network fundamentals including TCP/IP, DNS, routing, switching, and topologies.
- Build and troubleshoot secure network infrastructures using industry best practices.
- Use PowerShell to automate and manage Active Directory tasks.
- Analyze and defend against cybersecurity breaches with practical tools and techniques.
- Prepare for industry-recognized certifications that enhance employment opportunities in cyber security.

Career Opportunities

Graduates of this certificate program will be able to start their career with entry-level positions in medium to large-sized companies as an:

- Cyber Security Analyst
- Security Administrator
- IT Security Specialist
- Cyber Security Operations Analyst
- Network Security Operator
- Information Security Analyst

Course Duration:

850 Hours