

## Cybersecurity Short-Term Technical Certificate

Cybersecurity is the next logical evolution for IT professionals. Specifically, the Ohio Attorney General launched the CyberOhio Initiative in 2016; two of the goals of CyberOhio are to provide cybersecurity training opportunities for Ohio businesses and to create collaborative opportunities for colleges to partner with businesses for internships.



## Career Outlook

The career outlook for cyber security is very good. There is currently 0% unemployment in the field. According to current reports and statistics, there will be 6 million cyber security jobs by 2019. There will be a shortage of trained workforce and 1.5 million of those jobs will go unfilled.

(Source: "One Million Cybersecurity Job Openings in 2016," *Forbes.com*)

Possible career titles are security operations center analyst, information security analyst, cyber security analyst, penetration tester, information assurance analyst, and cyber operations analyst.



## STEM and Industrial Technology Division



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Dean

### Questions:

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[www.NorthwestState.edu](http://www.NorthwestState.edu)

Curriculum last revised  
in 2021-2022 catalog

### Education Pays

Average Annual Earnings  
Based on Education



Based on data from the Bureau of Labor Statistics

NSCC is accredited by:  
The Higher Learning Commission  
(312) 263-0456

# PROGRAM SEQUENCE

Course		Credits
+ CIS191	Computer Operations	3
+ CIS195	Network Essentials	3
+ EET107	Python Programming	3
+ CIS194	IT Security Fundamentals	3
+ CYB220	Security Auditing	3
+ CYB210	Cybersecurity Programming	3
+ CYB230	Network Security	3
<b>Total Program Credit Hours</b>		<b>21</b>

+ Refers to technical coursework. Students must attain a minimum grade of “C” in these technical courses in order to progress in the program and graduate.

## **CIS191 Computer Operations**

This course is an intensive study of operating systems and PC hardware. Topics include study of the theory and tasks commonly assigned to system software, basic disk and program commands, configuration and installation commands and techniques, as well as management of resources and security. Hardware issues are also addressed covering the theory, installation and maintenance of common personal computer hardware such as CPU's, memory, hard drives and peripheral devices. This course helps prepare the student for the CompTIA A+ Certification Exams.

## **CIS195 Networking Essentials**

This is a survey course designed to introduce students to basic network concepts and terminology. Both theoretical and practical material is introduced in this class. This course includes hands on laboratory assignments.

## **EET107 Python Programming**

This course teaches common programming topics using the Python programming language. Topics covered include programming terminology, the proper use of variables, input/output techniques, basic decisions, loops, lists, objects, and more. Students will complete multiple lab projects intended to reinforce the learning topics covered.

## **CIS194 IT Security**

This course is an introduction to security as it applies to computers, local area networks and the Internet. This class covers both methods of attack and the prevention of those attacks. The course provides an introduction to cryptography. The course covers the creation and implementation of a comprehensive security policy.

## **CYB220 Security Audits**

This course covers the topics of penetration testing and vulnerability assessments. This course focuses on the appropriate tools and methodologies necessary to test and assess an organization's security posture. Topics will include historical security incidents, current security incidents, the responsibilities and ethics of performing penetration tests and vulnerability assessments, and techniques of the trade..

## **CYB210 Cyber Programming**

This course covers various scripting and programming languages that can be used within Cybersecurity. The primary focus of the course is authoring software (scripts and programs) to enhance an organization's security posture. The course will include the Secure Development Lifecycle (SDLC) as well as projects that automate security tasks, perform security functions, and support a secure infrastructure.

## **CYB230 Network Security**

This course will introduce students to the concepts of network security. This course uses CIS 195 as a foundation. Students will learn to install and configure Intrusion Prevention Systems (IPS), Intrusion Detection Systems (IDS), firewalls, log managers, and network monitoring software. Students will become familiar with network security .

*Gainful employment information for NSCC's certificate programs can be found online at:*

*<https://northweststate.edu/gedt/cybersecurity/>*

*Gainful employment information includes: estimated cost of the program, average student loan debt*