

NETWORK SECURITY ADMINISTRATION (ATC)

Advanced Technical Certificate

Career-Technical Program

Interest Areas:

Business Admin. and Management

This Network Security Administration Advanced Technical Certificate program will prepare students for a career in the cybersecurity industry. The technical courses in this Advanced Technical Certificate program combine both networking concepts and security fundamentals with a focus on best practices required to implement and administer secure network environments. The program integrates knowledge from communications, social sciences, and math with the theory and practice of information technology to prepare students for employment in the industry. It will also provide opportunities for those employed in the information technology field to enhance their cybersecurity knowledge and credentials and advance in their careers. During the program students are encouraged to work toward a variety of industry certifications in addition to the certificate. Students will graduate with a Network Security Administration Advanced Technical Certificate upon successful completion of this program.

This is a selective enrollment program. Successful completion of each semester or permission of the instructor is required to continue to the next semester. Successful completion of the technical certificate or permission of the instructor is required for enrollment in third and fourth semester courses.

Final regulations published in the Federal Register on October 29, 2010, require institutions to report certain information about students who enrolled in Title IV (<https://www.nic.edu/programs/ge/TitleIV.aspx>) eligible educational programs that lead to gainful employment in a recognized occupation (GE programs). Those regulations also provide that institutions must disclose to prospective students certain information about the institution's GE Programs.

For programs that fall under these regulations, NIC provides information on cost, financing, and completion.

Program Website (https://www.nic.edu/programs/viewprogram.aspx?program_id=109)

Program Requirements

Course	Title	Credits
Semester 1		
CITE-118	Computer Information Technology Essentials	2
CITE-121	Network Support I	3
CITE-122	Network Support I Projects	3
CITE-124	TCP/IP Fundamentals	2
ENGL-101	English Composition	3
Select one of the following:		3-5
MCTE-101	Technical Mathematics	

GEM 3 - A.A.S. Mathematical Ways of Knowing		
	Credits	16-18
Semester 2		
CITE-142	Information Security Fundamentals	3
CITE-155	Linux Essentials	3
CITE-213	Network Support II	3
CITE-215	Network Support II Projects	3
COMM-101	Introduction to Speech Communication	3
	Credits	15
Semester 3		
CITE-165	Linux System Administration	3
CITE-235	Network Security Fundamentals	3
CITE-243	Command Line and Scripting Fundamentals	3
CITE-275	Intrusion Detection/Prevention Systems Fundamentals	3
	Credits	12
Semester 4		
CITE-104	Systems Administration I	3
CITE-105	Systems Administration I Projects	3
CITE-237	Ethical Hacking and Systems Defense	3
CITE-239	Network Forensics Incident Response	3
Select one of the following:		2-3
ATEC-117	Occupational Relations and Job Search	
CITE-289	Cyber Competitions	
CITE-296	Cybersecurity Internship	
	Credits	14-15
	Total Credits	57-60

Course Key



GEM



WCHE



AAS

Institutionally
Designated

Gateway



Milestone

Program Outcomes

Upon completion of the program, students will be able to:

- Evaluate various network devices and media and how best to secure them.
- Determine the factors involved in developing a secure information technology strategy.
- Describe and identify common security threats and attacks and describe how to safeguard against them.
- Perform a vulnerability assessment on a network.
- Monitor and analyze multiple sources of data to identify changes in circumstances or events.
- Access a computer system's security vulnerabilities using appropriate resources.
- Apply software patches to operating systems and applications.
- Explain how to use current forensic tools.
- Use standard software tools to detect attempted security breaches of computer systems. Implement computer network security defenses.
- Demonstrate sensitivity to and sound judgment on ethical issues as they arise in information security and cyber defense.
- Demonstrate professionalism through acceptable attitude, organization and time management skills, and attire.

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- Demonstrate appropriate work relationships and habits, communication skills, and computation skills used in entry-level network security administrator positions.