

Program Information

Network and Systems Administrator

2024/2026

Program Overview	The NSA program provides learners with comprehensive skills in Information Technology infrastructure design and support. Students apply their learning in hands-on advanced labs outfitted with industry-grade hardware and software from universally recognized technology leaders such as Cisco, Microsoft, Red Hat, and AWS. Upon completion of the program, students will be able to perform tasks related to networking, routing, switching, on-prem and cloud server administration, as well as essential remote access, communication, and messaging technologies. The NSA program offers curriculum and certification pathways from leading vendor academy partners in Information and Communication Technology education, such as: • Cisco Networking Academy • Microsoft Learn for Educators • CompTIA • AWS Academy • Red Hat Academy Students in the NSA program are prepared to write industry certification exams such as: • AWS Certified Cloud Practitioner • Cisco CCNA-Implementing and Administering Cisco Solutions • AZ-900 Microsoft Azure Fundamentals
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	• MS-900 Microsoft 365 Fundamentals • MS-203 Microsoft 365 Messaging Administrator Associate • CompTIA Server+ • CompTIA Security+ • CompTIA A+
Area of Study	Information and Communication Technologies
Credential	Diploma
Program Length	2 Years Full time (16 months)
Delivery	In-Classroom
Work-Integrated Learning	15-week practicum
Open to International Students	Yes
CIP Code	11.1001

Career Outcomes

- Network Analyst
- Network Technician
- System Analyst
- Help Desk Specialist
- Computer Analyst
- System Support Specialist
- Systems Administrator
- Cloud Administrator
- Incident Handler
- Intrusion Analyst

All Courses

Course Name	Description	Hours
Introduction to Computer Systems (NSA-500)	This course introduces students to fundamental computer hardware and software concepts. Students develop beginner-level IT skills essential for success in the program and their future careers.	96 hours
Networking and IT Essentials (NSA-510)	Students learn to assemble a computer and connect it securely to a network. The course provides an introduction to networking in a Cisco environment, covering key concepts and configurations.	96 hours
Introduction to Programming Using Python (NSA-520)	Students will learn the basics of programming using the Python Programming Language. Students will solve problems, explore real-world software development challenges, and create practical and contemporary applications.	42 hours
Microsoft Azure Fundamentals (NSA-530)	Students gain foundational skills in managing Microsoft Azure, including securing identities, configuring virtual networking, implementing storage solutions, and deploying cloud-based applications.	42 hours
Microsoft Azure Administration (NSA-540)	Building on Microsoft Azure Fundamentals, this course covers designing and implementing solutions using Azure for computing, networking, storage, and security applications.	84 hours

CCNA I: Introduction to Networks (NSA- 600)	Students learn fundamental networking concepts, including LAN setup, router and switch configuration, and IP addressing, to build a strong networking foundation.	84 hours
CCNA II: Switching, Routing, and Wireless Essentials (NSA- 610)	Students explore advanced router and switch configurations, troubleshooting techniques, and security best practices in IPv4 and IPv6 networks.	96 hours
CCNA III: Enterprise Networking, Security & Automation (NSA- 620)	This course covers large-scale network architecture, security, and automation, including WAN technologies, virtualization, APIs, and configuration management tools.	96 hours
CompTIA Security+ (NSA- 550)	Students develop core cybersecurity skills, including risk assessment, security implementation, and incident response in hybrid and cloud environments, with a focus on compliance and governance.	84 hours
Red Hat Linux I (NSA-560)	Students develop essential Linux administration skills, including command-line navigation, system management, and enterprise-level tools for Linux environments.	84 hours
Microsoft 365 Messaging (NSA- 570)	Students will gain knowledge of Microsoft 365 capabilities, the skills required to better understand the benefits of adopting cloud services, the basics of a Software as a Service (SaaS) cloud model, and the value of implementing Microsoft 365 cloud services.	96 hours

CompTIA Server+ (NSA-580)	Students will gain hands-on skills required of IT professionals who install, manage and troubleshoot servers in data centers as well as on-premise and hybrid environments. The course is vendor-neutral and not restricted to a single platform thus applications at the administrator level are valid in any environment because it is the only certification not restricted to a single platform. The course covers essential hardware and software technologies of on- premise and hybrid server environments including high availability, cloud computing and scripting.	96 hours
Technical Writing and Documentation (NSA-590)	This course is designed for IT professionals seeking to enhance their technical writing skills, with a focus on language use within the IT and cyber-security industries. Participants will explore the linguistic aspects of creating high-quality technical documents, such as proposals, manuals, process guides, and cyber-security-related materials. Through hands-on practice, students will learn the structure and format of these specialized documents and gain practical experience by crafting them. This approach equips participants with the skills to effectively and precisely communicate complex information tailored to technical and cyber-security contexts.	42 hours
Network and Systems Administrator Capstone (NSA- 630)	Students in this course will troubleshoot hardware, software, and network issues through hands-on practice and collaborative learning. Working in teams, they will design and build a simulated	42 hours



	enterprise network using skills gained in previous courses. They will then apply industry best practices to diagnose and resolve a range of simulated network problems, strengthening their technical and problem-solving abilities.	
Applied Network and Systems Administration (NSA-680)	The Work Practicum is an integral pathway to transition students from the MITT learning environment to the workplace. It offers students the opportunity to gain industry-relevant experience with a recognized employer and build on their technical skills while increasing confidence, employability, and job readiness.	420 hours