Industry Recognized Credential Transfer Assurance Guide: Information Technology – Introduction to Networking (CompTIA Network+)

August 16, 2023

Industry Recognized Credential Transfer Assurance Guides (ITAGs) are a statewide transfer initiative that guarantees the award of college-level credit to students earning agreed-upon, industry recognized credentials. Students meeting credentialing requirements, regardless of where the learning was achieved, will be eligible to earn credit for specified courses deemed equivalent to the stated industry recognized credential listed on the ITAG document. Credentials are reviewed and aligned to postsecondary learning outcomes that are endorsed by Ohio's public institutions of higher education. The receiving institution must offer an equivalent course or program. Additional information on accessing and awarding ITAG credit is outlined in this document.

Required Credential(s)

Credential Name: CompTIA Network+

Credential Issuer: CompTIA

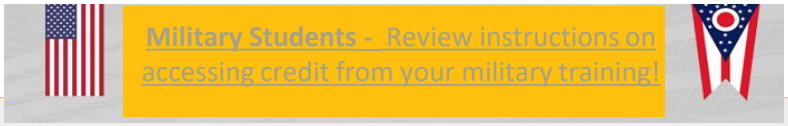
Exam(s): N10-008

Additional Requirements for Credit: Students must access credit within three years of passing the exam.

Credit Access and Verification

Student: Students wishing to receive credit should create a transcript of their certification via the CompTIA website and email it to the address provided by the institution: https://help.comptia.org/hc/en-us/articles/115005395083-Create-a-Transcript?tracking=help/certificates-credentials-transcripts/credentials/create-a-transcript

Institution: Provide email address for receipt of transcript to student.



Course Information

Course Name: ITITN002 (OIT002/CTIT002) Introduction to Networking (CompTIA Network+)

Credit Hours: 3

Course Description: This course is designed to provide network technicians and support staff with the foundation-level skills they need to install, operate, manage, maintain, and troubleshoot a network. Data communications, network components, the OSI reference model and popular industry communication protocols are explored. Major types of network topologies and infrastructures are discussed. This course will help prepare students for the CompTIA Network+ certification exam.

Learning Outcomes and Credential Alignment

Alignment of CompTIA Network+ Exam Objectives to Postsecondary Learning Outcomes

Postsecondary Learning Outcomes ***(Copy of OIT002/CTIT002)***	**Content from Credential** ***(Numbers refer to CompTIA Content Numbering System)***
1. Describe the fundamental concepts, technologies, components, and issues related to communications and data networks.	1.1 Compare and contrast the Open Systems Interconnection (OSI) model layers and encapsulation concepts. 1.5 Explain common ports and protocols, their application, and encrypted alternatives. 1.6 Explain the use and purpose of network services. 1.8 Summarize cloud concepts and connectivity options. 5.1 Explain the network troubleshooting methodology. 5.2 Given a scenario, troubleshoot common cable connectivity issues and select the appropriate tools. 5.4 Given a scenario, troubleshoot common wireless connectivity issues. 5.5 Given a scenario, troubleshoot general networking issues. 4.1 Explain common security concepts.
2. Describe common Networking models	1.2 Explain the characteristics of network topologies and network types.
3. Describe and construct common network media.	1.3 Summarize the types of cables and connectors and explain which is the appropriate type for a solution.
4. Describe Common Network Devices and their role in the network (Routers, Switches, Hosts, VPNs, Firewalls).	2.1 Compare and contrast various devices, their features, and their appropriate placement on the network. 2.2 Compare and contrast routing technologies and bandwidth management concepts.
5. Use common OSI network protocols.	1.4 Given a scenario, configure a subnet and use appropriate IP addressing schemes. 2.3 Given a scenario, configure and deploy common Ethernet switching features.

Learning Outcomes and Credential Alignment *(cont.)*

6. Design a basic network architecture given a specific need and set of hosts/clients.	1.4 Given a scenario, configure a subnet and use appropriate IP addressing schemes. 2.3 Given a scenario, configure and deploy common Ethernet switching features. 2.4 Given a scenario, install and configure the appropriate wireless standards and technologies. 1.7 Explain basic corporate and datacenter network architecture. 2.1 Compare and contrast various devices, their features, and their appropriate placement on the network.
7. Identify and use monitoring tools to decode and analyze network traffic (e.g., WireShark).	2.2 Compare and contrast routing technologies and bandwidth management concepts. 3.1 Given a scenario, use the appropriate statistics and sensors to ensure network availability. 5.3 Given a scenario, use the appropriate network software tools and commands.
8. Perform network mapping (enumeration and identification of network components) (e.g., Nmap).	5.3 Given a scenario, use the appropriate network software tools and commands.
9. Describe common network vulnerabilities.	4.1 Explain common security concepts. 4.2 Compare and contrast common types of attacks. 4.3 Given a scenario, apply network hardening techniques. 4.4 Compare and contrast remote access methods and security implications. 4.5 Explain the importance of physical security.

ITAG Development Panel

Name	Institution/Organization	Role
Ryan Moore	University of Cincinnati	Lead Panel Member - Faculty
Dovel Myers	Shawnee State University	Panel Member – Faculty
Kyle Jones	Sinclair Community College	Panel Member – Faculty
Ryan Burgess	Warren County Career Center	Panel Member – OTC Representative
Thomas O'Neill	Butler Tech	Panel Member – Secondary Representative
Dr. Hope Moon	Ohio Department of Higher Education	ODHE Consultant for ITAGs
Nikki Wearly	Ohio Department of Higher Education	Senior Director, Career-Technical Education Transfer Initiatives