

**Course Description:** Network+ Certification is a five-day class that prepares students to take the Network+ exam. Furthermore, the Network+ Certification can be the first step in achieving a Windows MCSE or CNE Certification.

**Who Should Attend:** This course is geared toward technicians with 18 to 24 months of experience in the IT industry who wish to earn their Network+ certification.

**Prerequisites:** An introductory course in a Windows operating system, or equivalent skills and knowledge, is required. CompTIA A+ certification, or the equivalent skills and knowledge, is helpful but not required.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Identify the basic components of network theory.
- Identify the major network communications methods.
- Identify network data delivery methods.
- List and describe network media and hardware components.
- Identify the major types of network implementations.
- Identify the components of a TCP/IP network implementation.
- List the major services deployed on TCP/IP networks.
- Identify characteristics of a variety of network protocols.
- Identify the components of a LAN implementation.
- Identify the components of a WAN implementation.
- Identify major issues and technologies in network security.
- Identify the components of a remote network implementation.
- Identify major issues and technologies in disaster recovery.
- Identify major data storage technologies and implementations.
- Identify the primary network operating systems.
- Identify major issues, models, tools, and techniques in network troubleshooting.

### Course Outline:

#### Network Theory

Networking Terminology  
Network Building Blocks  
Standard Network Models  
Network Topologies  
Network Categories

#### Network Communications Methods

Transmission Methods  
Media Access Methods  
Signaling Methods

#### Network Data Delivery

Data Addressing and Delivery  
Network Connection Mechanisms  
Reliable Delivery Techniques

#### Network Media and Hardware

Bounded Network Media  
Unbounded Network Media  
Noise Control  
Network Connectivity Devices

#### Network Implementations

The OSI Model  
Client Network Resource Access  
Ethernet Networks  
Token Ring Networks  
Fiber Distributed Data Interface (FDDI) Networks  
Wireless Technologies and Standards

#### Networking with TCP/IP

Families of Protocols  
The TCP/IP Protocol  
Default IP Addresses  
Custom IP Addresses  
The TCP/IP Protocol Suite

#### TCP/IP Services

IP Address Assignment Methods  
Host Name Resolution  
NetBIOS Name Resolution  
TCP/IP Utilities  
TCP/IP Upper-layer Services  
TCP/IP Interoperability Services

#### Other Network Protocols

The NetBEUI Protocol  
The IPX/SPX Protocol  
The AppleTalk Protocol  
The IP Version 6 (IPv6) Protocol

#### Local Area Network (LAN) Infrastructure

Bridges and Switches  
IP Routing Topology  
Static IP Routing  
Dynamic IP Routing  
Controlling Data Movement with Filters and VLANs

#### Wide Area Network (WAN) Infrastructure

WAN Switching Technologies  
WAN Transmission Technologies  
WAN Connectivity Methods  
Voice Over Data Systems

#### Network Security

Network Threats  
Virus Protection  
Local Security  
Network Authentication Methods  
Data Encryption  
Internet Security

#### Remote Networking

Remote Network Architectures  
Terminal Services Implementations  
Remote Access Networking Implementations  
Virtual Private Networking (VPN)

#### Disaster Recovery

Planning for Disaster Recovery  
Data Backup  
Fault Tolerance Methods

#### Network Data Storage

Enterprise Data Storage Techniques  
Clustering  
Network Attached Storage (NAS)  
Storage Area Network (SAN) Implementations

#### Network Operating Systems

Microsoft Operating Systems  
Novell NetWare  
UNIX and Linux Operating Systems  
Macintosh Networking

#### Network Troubleshooting

Troubleshooting Models  
TCP/IP Troubleshooting Utilities  
Hardware Troubleshooting Tools  
System Monitoring Tools  
Network Baselineing