

Course: Network+

Course Duration: One Semester

Prerequisites: Familiarity with Windows XP or Windows Vista

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

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 Baselining