Networking Technology (Online)

What is a Network?
- Defining the Network
- Network Classifications
- Network Topology
- Network Architecture
- Network Standards and Organizations
What is Network? Assessment

Designing a Network
- Needs Analysis
- Physical and Logical Design
- Assuring Security
- Assuring Quality
- Implementation
Designing a Network Assessment

How Data is Encoded and Transported
- Encoding
- Bandwidth
- Baseband and Broadband
- Simplex, Half-Duplex, Duplex
- The OSI Model
How Data is Encoded and Transported Assessment

Networking Hardware and Software
- Networking Components
- Networking Operations Systems
- Servers
- Web Servers and Services
- External Storage Systems
Networking Hardware and Software Assessment

The Physical Layer
- Physical Transmission Media
- Common Transmission Media Problems
- Long Distance Communication Media
Physical Layer Assessment
The Data Link Layer
  - Ethernet
  - VLANs
  - AV Data Link Protocols
  - Data Link Layer Assessment

Network Addressing
  - Network Layer Protocols
  - IP Addresses
  - Types of IP Addresses
  - IPv4 Subnetting and Supernetting
  - IPv6 Subnetting
  - IP Address Assignment
  - Naming Services
  - Network Addressing Assessment

IP Data Transmission
  - Routing Protocols
  - Transport Layer Protocols
  - The Upper Layers
  - IP Data Transmission Assessment

Network Security
  - Common Network Risks
  - Security Tools
  - System Backups
  - User Authentication
  - Secure Transmission Protocols
  - Virtual Private Networks
  - Wireless Security
  - Network Maintenance
  - Network Security Assessment

Troubleshooting Networked Systems
  - Troubleshooting Methodology
  - Network Infrastructure Troubleshooting Tools
  - Troubleshooting with TCP/IP Utilities
  - Troubleshooting Common Network Problems
  - Troubleshooting Networked Systems Assessment