

**Course 16. Network Administration**

SL. No.	Modules	Hours
1	Fundamentals of Networking	40
2	Network Administration	100
3	Network Defense and Counter Measures	80
4	Management Development Program	60
5	Project	40
	<b>Total</b>	<b>320</b>

**Eligibility:** Any Engineering /Science graduate with mathematics up to 10+2 level

**Prerequisite:** Candidate should have basic knowledge of computer, Operating system and networking fundamentals with logical approach.

**Course Focus:** This course is aimed to provide skills on networking and its maintenance and will help the students to make carrier in Network management.

**Detailed Syllabus****Fundamentals of Networking**

- Introduction to computer Networking
- Categories of Networking according to size (LAN,WAN,DAN,MAN)
- Types of connections
- Internetworking
- Configuration and IOS Management Commands
- Network classifications (Wired, Wireless )
- Network Hardware Devices (Hub, Switch, Modem, Router, Bridge , Repeaters , firewall etc ) Overview
- TCP/IP overview
- IP addressing, Sub-netting, super-netting
- IPv6
- Planning and Implementing
- Architecture of Internet and intranet
- Port Security
- Spanning tree Protocol
- Managing Traffic with Access Lists
- Troubleshooting

**Network Administration**

- Managing Hardware Devices & Drivers
- Managing Resources
- Managing User Accounts
- Managing Network Protocols & Services
- Managing Security
- Installing Windows 2008 Server
- Managing Network Protocols
- Managing Domain Name System

- Managing Domain Name System
- Managing DHCP
- Managing Microsoft Windows Internet Name Service (WINS)
- Managing Network Address Translation (NAT)
- Managing Microsoft Certificate Services
- Introduction to Active Directory Service
- Installing & Configuring Active Directory Directory Service
- Managing Domain Name System for Active Directory Directory Service
- Managing Active Directory Components
- Managing Desktop Configurations Using Group Policy and Remote Installation Services
- Managing Active Directory Security Solutions
- Internet Services
- Advanced File Systems
- Microsoft Windows 2008 Security

**Network Defense and Countermeasures**

- Security Fundamentals
- Firewalls
- Define the Types of Firewalls
- Application Layer Firewalls
- Packet Filtering Firewalls
- Hybrids
- Intrusion Detection And Prevention
- Intrusion risks
- Security policy
- Monitoring traffic and open ports
- Detecting modified files
- Investigating and verifying detected intrusions
- Recovering from, reporting and documenting intrusions
- Define the Types of intrusion Prevention Systems
- Set Up an IPS, Manage an IPS
- Understand Intrusion Prevention
- Issues with Intrusion Prevention
- IP Signature and Analysis
- Risk Analysis
- Virtual Private Networks
- Define Virtual Private Networks
- Deploy User VPNs
- Benefits of user VPNs
- Managing User VPNs
- Issues with User VPNs
- Deploy Site VPNs
- Benefits of Site VPNs
- Managing Site VPNs
- Issues with Site VPNs

**Management Development Program**

Introduction to communication, Barriers to communication, Kind of communication, Confidence building Non-verbal Communication, Fluency and vocabulary, Synonyms, Antonyms, Grammar, Noun Pronoun, Verb, Adjective, Preposition, Conjunction, Words of Idioms & phrases, Sentence Construction, Fill up the blanks, Pronunciation, Conversation practice, Polite Conversation, Greeting, Logical reasoning, General Aptitude, Writing: Covering letter, Resume, Email, Presentation Skill, group discussion, Interview skills, Mock interview

**Project**