



Course Outline Version 1

### **Foundations of network:**

- What is a network?
- Need for a network
- Client workstation and server
- Different network models
- Peer to peer
- Client/server
- Mainframe
- Types of network
- LAN
- WAN
- MAN
- Various network topologies
- Ring
- Mesh
- Star
- Tree Bus
- Linear Bus

### **Networking components**

- Introduction to network components
- Repeaters
- Hubs
- Bridges
- Router
- Switch
- Gateway
- Brouter
- Types of networking cables
- Media connectors
- How to choose on a cable

### **LAN technologies**

- Ethernet
- Physical characteristics
- Different categories in Ethernet
- Baseband and broadband properties

- Baseband Ethernet
- Broadband Ethernet
- Ethernet cables
- Twisted pair
- Coaxial
- Fiber optic
- Other types of Ethernet LAN
- Switched
- Fast
- Gigabit
- Virtual Private Network
- Benefits of using a VPN
- Connecting to a VPN using Windows 2000

### **Basic hardware components**

- Basic hardware components
- Installing CPU
- Installing motherboard
- Configuring motherboard
- Installing power supply
- Installing a hard drive
- Installing floppy and CD/DVD drives
- Legacy devices
- Interrupt Requests Line Assignments
- Direct Memory Access (DMA)
- Input/Output (I/O) Address
- Configuring IDE/ATA/SCSI devices
- Basic know how of safe BIOS settings
- Complementary Metal Oxide Conductor (CMOS)
- Understanding ports
- Data cables
- Connector
- Detecting hardware devices
- Using Device Manager

### **Network connectivity**

- Setting up a small network
- Connecting computers
- IP addressing
- Assigning IP address
- Adding computers to a group
- Network service
- DHCP
- WINS
- DNS
- Deciding on a network architecture
- Internet access technology
- xDSL
- Broadband cable (Cable modem)
- Wireless
- Dial-up connection
- Make a dial-up connection
- What is file sharing?
- Types of file sharing

- How to share a folder?
- Configuring share folder permissions

### **Wireless network**

- Introduction to wireless networks
- Basics
- Types of wireless networks
- WLAN
- WPAN
- WMAN
- WWAN
- Requirements for wireless network
- Antennas
- SSID
- Access point positioning
- What is Wired Equivalent Privacy(WEP) ?
- Setting up a wireless network
- How to access a WLAN?
- Advantage and disadvantage of wireless network

### **Networking environment**

- Introduction to Intranet
- Difference between Internet and Intranet
- Advantages of Intranet
- How Intranet operates?
- Inside an Intranet
- Checklist for building an Intranet
- Introduction to Extranet
- Difference between Internet and Extranet
- Advantages of an Extranet
- How an Extranet operates?
- Difference between Extranet and Intranet

### **Troubleshooting**

- Hardware errors and their codes
- Troubleshooting guidelines
- Troubleshooting:
  - Network connectivity
  - Testing network connectivity
- Motherboard failures
- Response
  - CPU failure
  - Power supply failure
  - Video/display failure
  - Memory chip failure
  - CD ROM failure

### **Prerequisites:**

Basic computing skills like browsing the web and checking e-mails.

### **Who Should Attend:**

- Office knowledge workers
- Home users
- Any non-IT person using computers in their office

### **Schedule:**

Please visit EC-Council's Accredited Training Centers to find all of our upcoming classes, dates and locations.

### **Duration:**

2 days (9:00 - 5:00)