

Wireless Networking (Wi-Fi)

Course Length	Two (2) days
Course Code	7400
Course Title:	Wireless Networking (Wi-Fi) (802.11)
Prerequisites	None, however a data fundamentals course is extremely helpful.
Course Overview:	This course is focused on providing any student the ability to layout out and design a wireless network, configure wireless routers and wireless networks adapters, add security to wireless networks, and to use the wireless network.

*** This course can be customized or combined to meet specific training needs ***

Course Outline

DAY 1

Wireless Networking Overview

- History of Wireless Networks
- Why Wireless

Wireless Network Architecture

- Wireless Basics
- RF Communication
- Network Design
- Transporting Data
- Ethernet and IP packets
- Power over Ethernet (PoE)

Wireless LANs (WiFi)

- 802.11a/b/g
- 802.11h
- 802.11i
- 802.11n
- Wireless Access Points



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Wireless Networking (Wi-Fi)

Deploying Hotspots

- Wireless Networking Equipment
 - Routers
 - Wireless Access Points
 - Switches
 - Adapter cards
- Single vs. Multiple Access points
- SSID
- Channel assignment
- Signal interference
- Address assignment
- IP addresses –Static vs. Dynamic DHCP
- Wired and Wireless access points on the same LAN

Connecting to the WAN

- DSL
- Cable
- Dedicated service – T1; DS3; Fiber

Internet Connectivity

- ISP requirements
- Two sides to every router- WAN/LAN

Performance Measurement

- Distance limitations
- WLAN throughput
- Testing Internet connectivity
- Measuring Internet throughput
- Monitoring performance

DAY 2

WLAN Security

- Threats to the WLAN
- SSID; access control
- Understanding Wireless Encryption
- Wired Equivalent Privacy (WEP)
- Wi-Fi Protected Access (WPA)
- Steps to a Secure Wireless Network

Wireless Networking (Wi-Fi)

Configuring Network Computers

- Windows OS settings
- Installing network adapters
- TCP/IP properties
- Network clients
- File and Printer sharing
- Workgroups
- Internet connection Firewalls
- 3rd party Firewall software

Voice over Wi-Fi

Equipment Interoperability Problems

Hands-on Labs