

CompTIA A+ Essentials 2009

- **Course Number:** 220-701
- **Course Length:** 5 Days

Certification Exam

This course is preparation for the CompTIA A+ Practical Application 2009 Certification exam.

Course Overview

CompTIA A+ Essentials measures the necessary competencies of an entry-level IT professional with at least 500 hours of hands-on experience in the lab or field. It tests for the fundamentals of computer technology, networking and security, as well as the communication skills and professionalism now required of all entry-level IT professionals.

Audience/Prerequisites

This course is intended for new information technology (IT) professionals, and existing CompTIA A+ certified professionals who are looking to remain current on their certifications.

Course Outline

<u>Course Introduction</u>	11m
<u>Module 01 - Troubleshooting Methodology</u>	1h 3m
Troubleshooting Methodology	
Popular Troubleshooting Models	
Basic Troubleshooting Stages	
CompTIA's A+ Model	
CompTIA's Network+ Model	
Novell's Model	
The ASID Model	
Gathering Information from the User	
Some Examples	
Identifying Hardware or Software Problem	
Information Resources	
Microsoft Help and Support	
Microsoft KB Article	
Demo - Help and Support in XP	
Demo - Help and Support in Vista	

Problem and Resolution Tracking
Help Desk Software
Professional Service
Professional Communication Guidelines
Pitfalls of Communication
Effective Communication
Verbal Communication
Verbal Guidelines
Nonverbal Communication
Customer Satisfaction
Service-level Agreement
Module 01 Review

Module 02 - Operating Systems

3h

Operating Systems
Windows
Microsoft Vista Business Edition
Macintosh (Mac) OS
Mac OS X Leopard
Linux
Ubuntu Linux
Windows Client Operating Systems
Product Lifecycle
Identify Available Support
Not Available in Vista Home Basic
Not Available in Either Home Version
Available in Home Premium & Ultimate
Available Only in Windows Vista Ultimate
Available in Ultimate and Enterprise
Windows XP Professional Features
Demo - Windows XP Professional
Windows 2000 Features
Windows 2000 Mobile Support
Demo - Windows 2000 Professional
32-bit versus 64-bit
The Windows Vista Desktop
Windows XP Professional Desktop
Windows 2000 Professional Desktop
Windows Aero Features
Windows Aero
3D Windows Flip
Aero System Requirements
Windows Explorer in Vista
Windows Explorer in XP
Demo - Windows Vista Explorer
The Control Panel (Vista)
Control Panel Search
Computer Management Console
Network Folder
Command-line Utility

Task Manager
Microsoft Management Console
Demo - Vista Features
Directory Structure
Navigating Directories
Creating Directories
Copying Directories
Removing Directories
Demo - Directories
Binary and Text Files
ASCII
File-name Extensions
Common File Extensions
File Names and Extensions
Batch Files
Demo - Batch Files
File Attributes
Command-line Utility
Attrib.exe
Demo - File Attributes
Demo - Command-line
Sharing Files with Local Users
Public Folder Sharing in Vista
Shared Documents
Demo - Sharing a Folder
Permissions
NTFS
NTFS File Permissions
NTFS Folder Permissions
Guidelines for NTFS Permissions
Assigning NTFS Permissions
Demo - Setting NTFS Permissions
Module 02 Review

Module 03 - Electricity and Power Supplies

57m

Electricity and Power Supplies
Characteristics of Electricity
Alternating and Direct Current
Characteristics, continued
Electricity
Safety Precautions
Electrostatic Discharge (ESD)
Preventing Static Buildup
Preventing Static Discharge
An Antistatic (ESD) Wrist Strap
Typical Internal Components
Slide Catches
Determining Which Side to Open
Removable Front Cover
Live Demo - ESD

Live Demo - Outside of the Computer
Live Demo - Inside of the Computer
A PC Power Supply
Voltage Selection Switch
Live Demo - Modern Power Supply
Live Demo - Legacy Power Supply
Power Supply Specifications
Typical Power Requirements
Standard Outputs
Power Connectors
Peripheral Power Connector
Live Demo - Peripheral Power Connector
Floppy Power Connector
SATA Power Connector
Wire Colors
Live Demo - Wire Colors
Motherboard Power Connectors
Live Demo - Motherboard Power Connectors
Power Supply Form Factors
Module 03 Review

Module 04 - CPUs and Motherboards

50m

CPUs and Motherboards
Central Processing Unit (CPU)
Control Units
Execution Units
CPU Performance
CPU Design Characteristics
Multiple-processor Support
Processor Specifications
Bus Width Specifications
Internal Specifications
Live Demo - Processor Installation
Inside the Case
Chipsets
Northbridge and Southbridge
CPU Packaging
PGA (Pin Grid Array) Package
SECC (Single Edge Cartridge) Package
Packages
Common Desktop Sockets and Slots
Pentium with MMX CPU & Socket 7 Socket
Typical Cooling Mechanisms
Cooling Notes
Heat Sinks and Cooling Fins
Power Supply and CPU Fans
Cooling Fins
Cooling Fins and a Fan
Live Demo - Cooling Fins and a Fan
Live Demo - Processor Fan

Other Cooling Techniques
Live Demo - Cooling Method
Motherboards
Components
A Motherboard
Live Demo - Motherboard
Daughter Board
Riser Card
Live Demo - Riser Card
Form Factor
Module 04 Review

Module 05 - The Basic Input/Output System

46m

The Basic Input/Output System
Firmware
BIOS
CMOS
CMOS Battery
CMOS Configuration
CMOS Utility Access Examples
CMOS Configurable Settings
BIOS Configuration Procedure
Demo - BIOS
BIOS Updates
BIOS Update Sources
Determining the BIOS Version
Flashing the BIOS
BIOS Update Failures
Recovering from a Failed Update
Bad CMOS Battery
Replacing CMOS Battery
Live Demo - Replacing CMOS Battery
POST Process
Beep Codes
Numeric Codes
Logo Screen
The Boot Process
Boot Devices
Boot Devices In The System BIOS
Module 05 Review

Module 06 - Memory Systems

1h 10m

Memory Systems
Memory
Measuring Memory
Larger Memory Units
Memory Types
Volatile vs. Non-volatile Memory
Dynamic vs. Static Memory
Asynchronous vs. Synchronous

Memory Access Types
Access Time
Speed Ratings
Banking Requirements
Packaging
Single- and Double-sided Modules
Package Types: Desktops
Package Types: Laptops
Package Type: Printers
Memory Error Recovery
Parity
Demo - Legacy Memory Modules
Live Demo - Legacy Memory Modules
Live Demo - Modern Memory Modules
Live Demo - Notebook Memory
Task Manager
Performance Tab Indicators
The Performance Tab
Demo - Task Manager
Virtual Memory
Optimizing the Page File
Demo - Page File
Module 06 Review

Module 07 - Bus Structures

49m

Bus Structures
Buses
PCI Bus Slots
Video Bus
An AGP Video Bus Slot
The Riser Bus
Three Riser Standards:
System Interaction
Interrupts
IRQs
Device Manager: IRQs
I/O Addresses
Device Manager: I/O Addresses
DMA Channels
Device Manager: DMA Channels
Base Memory Addresses
Device Manager: Base Memory
Demo - Device Manager
Bus Types
PC/XT Bus
PC/XT Card
PC/AT and ISA Bus
ISA Adapter
Live Demo - Comparing ISA to PCI
ISA Expansion Bus Slot

PCI Bus
PCI Adapter
Live Demo - Bus Slots
PCI Slots
PCIe
Multifunction Cards
Need for Video Buses
VESA Local Bus
VLB Adapter
PCI-based Video
AGP
AGP Adapter
AGP Standards
AGP Characteristics
AGP Slots
An AGP Slot
PCIe 02
A PCIe Video Card
Live Demo - Graphics Slots
Module 07 Review

Module 08 - Expansion Cards

1h 8m

Expansion Cards
Controllers and Interfaces
PC Drive Interfaces
IDE/ATA
ATA Standards
PIO Modes
DMA Modes
UltraDMA Modes
ATA Motherboard Connectors
Standard ATA Drive Cable
High-speed 80-pin ATA Drive Cable
SATA Data Cable
Live Demo - SATA Cable
Drive Capacities
Drive Identification
Primary and Secondary Channels
Live Demo - Drive Identification
SCSI
SCSI Device IDs
Termination
SCSI ID and Termination
Differential SCSI
ST506 / ST 412 Interface
ESDI Interface
USB Interfaces
IEEE 1394 (FireWire, i.Link) Interfaces
Video Adapters
Creating an Image

Maximum Colors
Video Standards
SuperVGA
15-pin VGA/SVGA Connector
VGA/SVGA Connector and Socket
DVI Connection Types
DVI-D Port
DVI-I Port
HDMI (High-Definition Multimedia Interface)
Live Demo - Identifying Video Adapter Types
PC Sound
Sound Card Components
A Sound Card
Sound Card Connectors
Live Demo - Sound Connectors
Speakers
CD Audio
Modems
Riser Cards - AMR
Riser Cards - CNR
Riser Cards - ACR
Comparing AMR and CNR
Softmodems
When a Modem isn't a Modem
Modem Connections
Live Demo - RJ-11 Connectors
Live Demo - Network Cards and Cables
Data Transmission Speed
ITU Standards
MNP Classes
Error Detection and Compression
Module 08 Review

Module 09 - Peripheral Connection Types

1h 34m

Peripheral Connection Types
Ports
Serial Ports
Serial Port Characteristics
Serial Port Characteristics – Parity Options
Serial Port Characteristics – Flow Control
Male and Female Connectors
Serial Cables
Serial Connector Pin Numbering
Pin Numbers
9-pin Null Modem Connections
25-pin Null Modem Connections
Live Demo - Serial Connectors
Parallel Ports
Parallel Port Resources
Port Types

Printer Port Types
Female 25-pin Parallel
Centronics
Live Demo - 25-pin Parallel Port/Centronics Connector
Input Devices
Keyboard Port and Connector
AT Keyboard Port and Connector
Mouse Port and Connector
Bar Code Reader with Y-cable
Live Demo - PS/2 Keyboard and Mouse
Live Demo - USB Mouse
Demo - USB Mouse
Mouse Properties
Demo - Mouse Properties
Keyboard Properties
Demo - Keyboard Properties
KVM Switch
PS/2 KVM
USB KVM
USB Features
USB Classes
USB Device Classes
USB Versions
USB Symbols
USB Devices in Device Manager
USB Ports
USB Connectors
Live Demo - USB Connectors
USB Specifications
USB Power
Installing USB Device via USB Port
Installing USB Devices
FireWire Features
FireWire Versions
Isochronous Transfers
4-pin FireWire Port and Connector
6-pin FireWire Ports and Connector
FireWire Power
Installing IEEE 1394 Devices
Live Demo - FireWire Cable
Multimedia Connections
1/8" Connectors
Example of Line-in Device
Speakers Connected to a PC
Speakers Connected Together
Microphone Connection to a PC
Live Demo - Back of PC
RCA Connectors
S-Video Connectors
RCA and S-Video Connectors

Coax Connectors
Coax Connector
MIDI Connectors
S/PDIF
S/PDIF Connections
Module 09 Review

Module 10 - Data Storage Devices

1h 45m

Data Storage Devices
Hard Drive Components
Components of Magnetic Hard Drive
Solid-state Drives
Solid-state Drive Advantages
Magnetic Drive Advantages
Hard Drive Geometry
Head Crash
Hard Drive Connections
Partitioning
Partition Types
Partitioning Utilities
File Systems
FAT File System
NTFS File System
FAT vs. NTFS
Directory Trees
Root directory of C:
Formatting
Demo - Disk Manager
Fault Tolerance
RAID Levels
Choosing a RAID Level
Striped Volume
Mirrored Volume
RAID 5
Software and Hardware RAID
Hardware RAID Advantages
Components of a CD
Recordable CDs
CD Drive Components
CD Drive Speeds
DVDs
DVD Types
DVD Standards
Blu-Ray Discs
Optical Drive Connections
Live Demo - Optical Drive Connections
Using a CD
Using CD and DVD drives
Demo - Burn CD
USB Flash Drives

USB Technical Specifications
Flash MP3 Player
USB Drivers
Demo - USB Drives
Floppy Disks
5.25" Floppy Disk
3.5" Floppy Disk
Floppy Disk Storage
Capacities
Write Protection
Floppy Controller Resources
Floppy Drive Cable
Floppy Controller Connector
Diskette Preparation
Tape Drives
Tape Formats
Tape Head Cleaning
Hard Disk Maintenance
Disk Cleanup
Demo - Disk Cleanup
ScanDisk
ScanDisk Versions
Demo - Running Scan Disk
Chkdsk
Disk Defragmenter
Disk Defragmenter in Windows XP
Demo - Disk Defragmenter
Module 10 Review

Module 11 - Video Output and Image Input Devices

36m

Video Output and Image Input Devices

CRT Monitor
CRT Components
How CRTs Produce Images
Degaussing
CRT Characteristics
Video Connectors
Display Properties
Display Adjustments
Safety
Flat-Panel Monitor
LCD Advantages
How an LCD Works
Flat-Panel Monitor Characteristics
Touch-Screen
Touch-Screen Input

Laptop Monitors
Flat-Panel Monitor Connections
TMDS
LCD Monitor Installation
Multiple Monitors
Display Projectors
DisplayPort Technology
Demo - Multiple Monitors
Scanners
Flatbed Scanner
Multifunction Sheet-feed Scanner
Hand-held Scanner
TWAIN
Scanner Configuration Features
Scanner Connections
Digital Cameras
Resolutions
Digital Camera Memory Cards
Memory Cards
Printing Images
Digital Camera Connections
Memory Card Readers
Web Cameras (IP Camera's)
Webcam Example
Network Cameras
Network Camera Example
Network Camera Uses
Headsets, Microphones, and Speakers
Connection Software
Module 11 Review

Module 12 – Printers

55m

Printers
Dot-Matrix Printer
Dot-Matrix Printer Components
Dot-Matrix Printer Connections
Dot-Matrix Options
Other Impact Printers
An Inkjet Printer
Inkjet Process
Inkjet Cartridge Print Heads

Print Heads
Inkjet Print Quality
Straight-Through Paper Path
Curved Paper Path
Photo Printers
Printing onto a CD
Laser Printer
Laser Printer Components
Toner Cartridge Components
Laser Scanner Assembly
Power Supplies
Paper Control and Transport Assembly
Transfer Corona Assembly
Fusing Assembly
Electronic Control Package
Laser Printing Process
Live Demo - Printers
Other Printer Types
Plotter
Additional Printer Types
Main Windows Print Processes
Client Printer Process
Spooler Process
Inkjet Printer Installation
Ink-Level Monitoring Utility
Printer Interfaces
Inkjet Communications Interfaces
Configure the Connection Type
Parallel Port in Device Manager
Installing an Inkjet Printer
Upgrading a Device Driver
Laser Printer Installation
Laser Printer Interfaces
Communications Interfaces
Installing a Laser Printer
Printer Configuration Options
Demo - Installing a Printer
Printer Options
Maintenance
Dot-Matrix Printer Maintenance
Inkjet Printer Maintenance

Laser Printer Maintenance

Module 12 Review

Module 13 - Connecting Computers

1h 54m

Connecting Computers

Local Area Network

Example of a LAN

Basic Types of Networks

The Peer-to-Peer Model

A Peer-to-Peer Network

Peer-to-Peer Authentication

Local User Accounts

Using a Shared Resource

The Client/Server Model

A Client/Server Network

Network Client

The Logon Process

Network Wiring

Fiber Optic Cable

Fiber Optic Cable Networks

Twisted-Pair Cable

Composite Cable

Coaxial Cable

Duplex

Ethernet

Ethernet Media

Ethernet Standards

Wireless LAN

Benefits & Drawbacks of WLANs

Wide Area Network

WAN Connections

POTS/PSTN

ISDN

VPN

DSL

Cable

Satellite

Wireless WAN

Cellular

3G Networks

4G Networks

T and E lines
X.25 and Frame Relay
ATM
Fiber Optic Wired Connections
SONET
Fiber Optic Connectors
Fiber Optic Connector Types
Twisted-Pair Connections
UTP Categories
Stranded vs. Solid TP Cable
Twisted-Pair Connectors
RJ Connectors
Modern Residential Wiring
RJ-25 Pinout
RJ-45 Connector
Pin Numbering of RJ-45 Connector
Live Demo - RJ-45 and RJ-11 Connectors
Coaxial Connections
Common Components of Coaxial
RG Standards
Thinnet Connectors
Thicknet Vampire Tap
Live Demo - Coax and Coax Networks
Plenum Wiring
Network Interface Card
Computer Network Connections
PCI Ethernet Card
Notebook Computers
NIC Selection
Status Indicator Lights
Device Manager
Live Demo - Examining your NIC
Modems
Modulation/Demodulation
Connections
Star Topology
Ethernet Hubs
How a Hub Works
Router
Routing between Network Segments
Routers: Key Points

Live Demo - Configure Router

Demo - Router Setup

Layer 2 Switches

VLAN Trunking

Module 13 Review

Module 14 - Networking Computers

3h 2m

Networking Computers

Network Protocol

Wireless Network Protocols

Demo - Install Protocols

Addressing

MAC Address

IPv4

Classful IPv4 Addresses

IP Classes

Parts of an IP Address

Subnet Masks

Network IDs

Special Addresses

APIPA

CIDR

CIDR Address

IPv6

IPv6 Address Types

IPv6 Address Scopes

Default Gateway

Routing Example

Character-Based Names

Domain Name System (DNS)

Top-level Domains

Countries As Top Level Domains

New Top Level Domains

NetBIOS

Resolving NetBIOS by Broadcast

Resolving NetBIOS by WINS

IPCONFIG

Example of ipconfig /all Results

Demo - ipconfig/all (xp)

Demo - ipconfig /all (Windows 7)

Ping

Successful Ping
Steps after Unsuccessful Ping
Demo - Troubleshooting TCP/IP
Demo - Ping
TCP/IP Architecture
Application-Layer Protocols
HTTP
FTP
Telnet
E-mail Protocols
Port Addresses
Service Port Addresses
Demo - Netstat
Static TCP/IP Configuration
Demo - Configuring TCP/IP
DHCP and DHCPv6
The IPv4 Lease Process
The IPv6 Lease Process
IPv6 Router Flags
Wireless Nodes on a Network
Wireless Connection Components
Wireless NICs
Wireless Access Points
Wireless Speeds
WAP Configuration
Securing your AP
Wireless Authentication Methods
The 802.1 Protocol
Demo - Wireless Access Point
Wireless Auto Configuration
Wireless Network Problems
Demo - Wireless Client
Creating a Dial-up Connection
Vista Dial-up Connection Wizard
Vista: Connect to a Workplace
Dial-up Connection Properties
Module 14 Review

Module 15 - Portable Computers

Portable Computers
Notebook Computer

1h 22m

Typical Notebook Components

Live Demo - Mini PC Card

Notebooks

Netbooks

Notebook Batteries

Battery Types

Power Adapters

Power Indicator Lights

Notebook Processors

Notebook Memory

Notebook Drives

Accessing the Hard Drive

Swapping a Removable Drive

Live Demo - Hot-Swappable Components

Notebook Keyboard

LCD Monitors

Native Resolutions

Notebook Pointing Devices

Touchpad

Handwriting Technology

Notebook Peripheral Ports

Live Demo - Inside of Laptop

Wireless Communication

Infrared

IrDA Port

Radio

802.11g Wireless Router

Bluetooth

Network Connections

PC Card Types

Type II PC Card

Live Demo - Type II PC Card

PC Card Bus Types

Inserting and Removing PC Cards

Card and Socket Services

Mini PCI Card

Live Demo - Mini PC Card 02

Network Adapters and Modems

Desktop Features

Port Replicator

Notebook Computer Issues

Power Issues

Demo - Power Management Utility

Power-Related Measurements

Replacing the Battery
Troubleshooting Power Problems
Maintenance
Operating Environment
Transporting a Notebook
Module 15 Review

Module 16 - Monitoring and Management

1h 58m

Monitoring and Management
Windows Diagnostics
System Information Window
Remote Computer Information
Demo - Windows Diagnostics
Command-Line System Information
DirectX Diagnostic
DirectX Diagnostic Tool
DirectX Diagnostic Pages
Demo - DirectX Diagnostics
Task Manager
Windows Task Manager
The Applications Tab
Demo - Monitoring Applications
The Processes Tab
The Services Tab
The Performance Tab
Demo - Monitoring Performance
The Networking Tab
The Users Tab
Computer Management
Event Viewer
Event Information
Event Types
Event Properties
Demo - Event Logs
Resource Overview
Detailed View of CPU Resource
Demo - Resource Monitor
Performance Monitor
Performance Monitor Real-Time Graph
Performance Objects
Bottlenecks
Adding Counters
Real-Time Monitoring
Performance Monitor Configuration
Performance Monitor Tabs

The Registry
Registry Keys
Registry Editors
Windows Vista Registry Editor
Registry Searches
Registry Corruption and Backups
Demo - Registry
Demo - Registry Backup
Services and Applications
Services
The Services Console
Service Properties
Dependencies
Demo - Services
Power Management
Power Option Configuration
Power Plans
Demo - Power
Sleep and Hibernation Modes
Power Options: Notebooks
Power Options: Desktops
Wake Up on LAN
A NIC'S "Wake Up on LAN" Settings
Module 16 Review

Module 17 - Operating System Troubleshooting

1h 13m

Operating System Troubleshooting
Startup Files
Startup Process
Startup Messages
Operating-System Load Errors
Windows Shutdown Error
Demo - Startup Messages
Startup Modes
Advanced Boot Options Menu
Demo - Startup Modes
System Configuration Utility
Services Page
Startup Modes for Troubleshooting
Demo - System Configuration
Recovery Console
Folder Access in Recovery Console
System Recovery Options Menu
System Recovery Options
Emergency Repair Disk
Windows 2000 Professional ERD
Automated System Recovery

ASR Tasks
System Restore
Vista System Protection
Restoring the System
System Restore in Vista
Restore Points in Vista
System Restore in Windows XP
Restore Points in XP
Demo - System Restore
Module 17 Review

Module 18 – Security

1h 54m

Security
User Accounts
User Names and Passwords
Password Protection
Creating Strong Passwords
Multiple Passwords
User Account Types
Groups
Demo - Local Users and Groups (XP)
Demo - Vista Local User
Demo - Active Directory Groups
Authentication
Authentication Protocols
Security Policies
Password Policies
Setting Values
Account Lockout Policy
Computer vs. Domain
Demo - Local Security Policies
Encryption
Encrypted File System
Demo - Encryption
Whole-Disk Encryption
BitLocker Hardware Requirements
BitLocker Authentication Modes
BitLocker Life Cycle
BitLocker Recovery
Other Whole-Disk Encryption Systems
Biometrics
Biometric Devices
Pros and Cons of Biometric Devices
Smart Cards
Smart Card Components
Smart Card Use
Fobs
BIOS Security
Alleviating Security Risks
Physical Access Restrictions

Firewalls
Firewall Functions
Hardware Firewall
Software Firewall
Proxy Server
Port and Packet Filters
Windows Security Center
Windows Firewall
Windows Firewall Advanced Settings
Demo - Windows Security Center
Demo - Vista Firewall
Social Engineering Attacks
Malicious Software
Protecting Computer Systems
Data Security and Destruction
Data Destruction
Data Migration
Security Policy Contents
Locking Windows Vista
Security Classifications
Module 18 Review

Module 19 - Windows Installation and Upgrades

1h 15m

Windows Installation and Upgrades
Installing Windows Operating Systems
Clean Installation vs. Upgrade
Pre-Installation Tasks
File Backup and Transfer
Windows Vista Home Basic
Windows Vista Home Premium and Business / Ultimate / Enterprise
Windows XP Professional / Home
Windows 2000 Professional
Windows Media Center
Hardware Compatibility
The Upgrade Advisor
Windows Vista Upgrade Advisor
Running the Upgrade Advisor
Windows XP Upgrade Advisor
Demo - Upgrade Advisor
Partitions and Formatting
Windows Vista Installation Methods
Windows 2000 / XP Installation
Network Installation
Unattended Installations
Clean Install of Windows Vista
Product Keys and Activation
Windows Update
Windows Vista Network Locations
Windows XP / 2000 Installation
Setup Issues

Demo - Install Vista
Post-Installation Tasks
Devices and Drivers
Demo - Device Drivers
Driver Signing
Windows Vista Upgrade Paths
Upgrade Between Vista Versions
Pre-Windows Vista Upgrades
Pre-Upgrade Tasks
Hardware and Software Compatibility
Upgrade Process
Upgrades within Windows Vista
Upgrade Issues
Application Compatibility
Vista Program Compatibility Wizard
Windows 2000 Application Compatibility
Demo - Windows 7 Install
Module 19 Review

Module 20 - Safety and Maintenance

30m

Safety and Maintenance
Office Hazards: Floor Surfaces
Office Hazards: Fire Safety
Fire Extinguisher Classes
Fire Extinguisher Types
Office Hazards: Electrical Safety
Office Hazards: Air Quality
Computer Hazards
Physical Hazards
Laser Printer and Copier Toner
Electrical Hazards
Incident Reporting
High-Voltage Interference: Outside
High-Voltage Interference: Inside
Electrostatic Discharge (ESD)
Electromagnetic Induction (EMI)
Minimizing High-Voltage Interference
Shielding and Filtering
Ventilation, Dust, and Moisture Control
Printer/Scanner Maintenance
Power Conditioning
Cleaning Computer Equipment
Live Demo - Maintenance
Material Safety Data Sheets (MSDS)
MSDS Hazard Ratings
Personal Protection by Rating
Ergonomic Workstations
Laptop Safety
Computer Equipment Disposal
Module 20 Review

Module 21 - Troubleshooting Hardware

42m

- Troubleshooting Hardware
- Backing Up Files and Folders
- Windows Vista Backup Utility
- Automatic Backups
- Windows XP Backup
- Restoring Data
- Restoring Files in Windows XP
- Demo - Vista Backup
- Hardware Related Symptoms
- Power-Supply Problems
- The Power_Good Signal
- Troubleshooting Motherboards & CPUs
- Motherboard and CPU Problems
- Memory Problems
- Drive Controller Problems
- Video Adapter Problems
- Sound Card Problems
- Modem Problems
- NIC Indicator Lights
- Hard Drive Problems
- CD Drive Problems
- DVD Drive Problems
- Module 21 Review
- Course Closure

Total Duration: 28h 33m