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Requirements & Prerequisites

End-user skills with Windows-based personal computers, including the ability to: browse and search for information on the internet

Target Audience

The target student is anyone with basic computer user skills who is interested in obtaining a job as an IT professional or pc technician.

Learning/Delivery Method

Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

Course Duration

5 Days

(CA+_01) CompTIA A+ Certification

Course Description

In this course, students will install, upgrade, repair, configure, optimize, troubleshoot, and perform preventative maintenance on basic personal computer hardware and operating systems. CompTIA A+ 220-1001 covers the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking. CompTIA A+ 220-1002 covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g. network connectivity and email) for mobile operating systems Android and Apple iOS

Learning Outcome

Upon completion of this program, participants should be able to :
- Identify the components of standard desktop personal computers.
- Identify fundamental components and functions of operating systems.
- Identify best practices followed by professional personal computer technicians.
- Install and configure computer components.
- Maintain and troubleshoot computer components.
- Install and configure operating systems.
- Maintain and troubleshoot installations of Microsoft Windows.
- Support laptops and portable computing devices.
- Support printers and scanners.
- Support personal computer network connectivity.
- Support personal computer security.

Course Outline

Lesson 1: Hardware Fundamentals

- Personal Computer Components
- Storage Devices
- Mobile Digital Devices

Lesson 2: Operating System Fundamentals

- PC and Mobile Operating Systems
- PC Operating Systems Tools and Utilities

Lesson 3: Networking and Security Fundamentals

- Network Types
- Network Components
- Common Network Services
- Cloud Concepts
- Security Fundamentals

Lesson 4: Safety and Operational Procedures

- Basic Maintenance Tools and Techniques
- Personal and Electrical Safety
- Environmental Safety and Materials Handling
- Professionalism and Communication
- Organizational Policies and Procedures
- Troubleshooting Theory

Lesson 5: Supporting Display Devices

- Install Display Devices
- Configure Display Devices
- Troubleshoot Video and Display Devices

Lesson 6: Installing and Configuring Peripheral Components

- Install and Configure Input Devices
- Install and Configure Output Devices
- Install and Configure Input/output Devices
- Install and Configure Expansion Cards

Lesson 7: Managing System Components

- Identify Motherboard Components and Features
- Install and Configure CPUs and Cooling Systems
- Install Power Supplies
- Troubleshoot System Components

Course Outline

Lesson 8: Managing Data Storage

- Identify RAM Types and Features
- Troubleshoot RAM Issues
- Install and Configure Storage Devices
- Configure the System Firmware
- Troubleshoot Hard Drives and RAID Arrays

Lesson 9: Installing and Configuring Microsoft Windows

- Implement Client-Side Virtualization
- Install Microsoft Windows
- Use Microsoft Windows
- Configure Microsoft Windows
- Upgrade Microsoft Windows

Lesson 10: Optimizing and Maintaining Microsoft Windows

- Optimize Microsoft Windows
- Back Up and Restore System Data
- Perform Disk Maintenance
- Update Software

Lesson 11: Working With Other Operating Systems

- The OS X Operating System
- The Linux Operating System

Lesson 12: Customized Client Environments

- Types of Common Business Clients
- Custom Client Environments

Lesson 13: Networking Technologies

- TCP/IP Properties and Characteristics
- TCP/IP
- Internet Connections
- Ports and Protocols
- Networking Tools

Lesson 14: Installing and Configuring Networking Capabilities

- Configures Basic Windows Networking
- Configure Network Perimeters
- Using Windows Networking Features
- Install and Configure SOHO Networks

Course Outline

Lesson 15: Supporting Mobile Digital Devices

• Install and Configure Exterior Laptop Components
• Install and Configure Interior Laptop Components
• Other Mobile Devices
• Mobile Device Accessories and Ports
• Mobile Device Connectivity
• Mobile Device Synchronization
• Troubleshoot Mobile Device Hardware

Lesson 16: Supporting Printers and Multifunction Devices

• Printer and Multifunction Technologies
• Install and Configure Printers
• Maintain Printers
• Troubleshoot Printers

Lesson 17: Security Threats, Vulnerabilities, and Controls

• Common Security Threats and Vulnerabilities
• General Security Controls
• Mobile Security Controls
• Data Destruction and Disposal Methods

Lesson 18: Implementing Security Controls

• Secure operating Systems
• Secure Workstations
• Secure SOHO Networks
• Secure Mobile Devices

Lesson 19: Troubleshooting System-Wide Issues

• Troubleshoot PC Operating Systems
• Troubleshoot Mobile Device Operating Systems and Applications
• Troubleshoot Wired and Wireless Networks
• Troubleshoot Common Security Issues

Please refer to this link for more information relating to this certification's career path.

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