

CompTIA A+ (Exams 220-901 and 220-902)

Course Description

Overview:

If you are getting ready for a career as an entry-level information technology (IT) professional or computer service technician, the CompTIA® A+® course is the first step in your preparation. The course will build on your existing user-level knowledge and experience with personal computer (PC) software and hardware to present fundamental skills and concepts that you will use on the job. In this course, you will acquire the essential skills and information you will need to install, configure, optimize, troubleshoot, repair, upgrade, and perform preventive maintenance on PCs, digital devices, and operating systems.

The CompTIA A+ course can benefit you in two ways. Whether you work or plan to work in a mobile or corporate environment where you have a high level of face-to-face customer interaction, where client communication and client training are important, or in an environment with limited customer interaction and an emphasis on hardware activities, this course provides the background knowledge and skills you will require to be a successful A+ technician. It can also assist you if you are preparing to take the CompTIA A+ certification examinations, 2016 objectives (exam numbers 220-901 and 220-902), in order to become a CompTIA A+ Certified Professional.

Course Objectives:

In this course, you will learn to install, configure, optimize, troubleshoot, repair, upgrade, and perform preventive maintenance on personal computers, digital devices, and operating systems.

You will:

- Identify the hardware components of personal computers and mobile digital devices.
- Identify the basic components and functions of operating systems.
- Identify networking and security fundamentals.
- Identify the operational procedures that should be followed by professional PC technicians.
- Install, configure, and troubleshoot display devices.
- Install and configure peripheral components.
- Manage system components.
- Manage data storage.
- Install and configure Microsoft Windows.
- Optimize and maintain Microsoft Windows.
- Work with other operating systems.
- Identify the hardware and software requirements for client environment configurations.
- Identify network technologies.
- Install and configure networking capabilities.
- Support mobile digital devices.
- Support printers and multifunction devices.

- Identify security threats, vulnerabilities, and controls.
- Implement security controls.
- Troubleshoot system-wide issues.

Prerequisites:

To ensure your success in this course, you should have basic computer user skills, be able to complete tasks in a Microsoft® Windows® environment, be able to search for, browse, and access information on the Internet, and have basic knowledge of computing concepts.

Course Content

Lesson 1: Hardware Fundamentals

Topic A: Personal Computer Components

Topic B: Storage Devices

Topic C: Mobile Digital Devices

Topic D: Connection Interfaces

Lesson 2: Operating System Fundamentals

Topic A: PC and Mobile Operating Systems

Topic B: PC Operating System Tools and Utilities

Lesson 3: Networking and Security Fundamentals

Topic A: Network Types

Topic B: Network Components

Topic C: Common Network Services

Topic D: Cloud Concepts

Topic E: Security Fundamentals

Lesson 4: Safety and Operational Procedures

Topic A: Basic Maintenance Tools and Techniques

Topic B: Personal and Electrical Safety

Topic C: Environmental Safety and Materials Handling

Topic D: Professionalism and Communication

Topic E: Organizational Policies and Procedures

Topic F: Troubleshooting Theory

Lesson 5: Supporting Display Devices

Topic A: Install Display Devices

Topic B: Configure Display Devices

Topic C: Troubleshoot Video and Display Devices

Lesson 6: Installing and Configuring Peripheral Components

Topic A: Install and Configure Input Devices

Topic B: Install and Configure Output Devices

Topic C: Install and Configure Input/Output Devices

Topic D: Install and Configure Expansion Cards

Lesson 7: Managing System Components

Topic A: Identify Motherboard Components and Features

Topic B: Install and Configure CPUs and Cooling Systems

Topic C: Install Power Supplies

Topic D: Troubleshoot System Components

Lesson 8: Managing Data Storage

Topic A: Identify RAM Types and Features

Topic B: Troubleshoot RAM Issues

Topic C: Install and Configure Storage Devices

Topic D: Configure the System Firmware

Topic E: Troubleshoot Hard Drives and RAID Arrays

Lesson 9: Installing and Configuring Microsoft Windows

Topic A: Implement Client-Side Virtualization

Topic B: Install Microsoft Windows

Topic C: Use Microsoft Windows

Topic D: Configure Microsoft Windows

Topic E: Upgrade Microsoft Windows

Lesson 10: Optimizing and Maintaining Microsoft Windows

Topic A: Optimize Microsoft Windows

Topic B: Back Up and Restore System Data

Topic C: Perform Disk Maintenance

Topic D: Update Software

Lesson 11: Working With Other Operating Systems

Topic A: The OS X Operating System

Topic B: The Linux Operating System

Lesson 12: Customized Client Environments

Topic A: Types of Common Business Clients

Topic B: Custom Client Environments

Lesson 13: Networking Technologies

Topic A: TCP/IP Properties and Characteristics

Topic B: TCP/IP

Topic C: Internet Connections

Topic D: Ports and Protocols

Topic E: Networking Tools

Lesson 14: Installing and Configuring Networking Capabilities

Topic A: Configure Basic Windows Networking

Topic B: Configure Network Perimeters

Topic C: Using Windows Networking Features

Topic D: Install and Configure SOHO Networks

Lesson 15: Supporting Mobile Digital Devices

Topic A: Install and Configure Exterior Laptop Components

Topic B: Install and Configure Interior Laptop Components

Topic C: Other Mobile Devices

Topic D: Mobile Device Accessories and Ports

Topic E: Mobile Device Connectivity

Topic F: Mobile Device Synchronization

Topic G: Troubleshoot Mobile Device Hardware

Lesson 16: Supporting Printers and Multifunction Devices

Topic A: Printer and Multifunction Technologies

Topic B: Install and Configure Printers

Topic C: Maintain Printers

Topic D: Troubleshoot Printers

Lesson 17: Security Threats, Vulnerabilities, and Controls

Topic A: Common Security Threats and Vulnerabilities

Topic B: General Security Controls

Topic C: Mobile Security Controls

Topic D: Data Destruction and Disposal Methods

Lesson 18: Implementing Security Controls

Topic A: Secure Operating Systems

Topic B: Secure Workstations

Topic C: Secure SOHO Networks

Topic D: Secure Mobile Devices

Lesson 19: Troubleshooting System-Wide Issues

Topic A: Troubleshoot PC Operating Systems

Topic B: Troubleshoot Mobile Device Operating Systems and Applications

Topic C: Troubleshoot Wired and Wireless Networks

Topic D: Troubleshoot Common Security Issues