

# **CompTIA® A+® Certification: A Comprehensive Approach (Exams 220-801 and 220-802)**

## **Course Specifications**

### **Course Number:**

093001

### **Course Length:**

5 days

## **Course Description**

### **Overview:**

If you are getting ready for a career as an entry-level information technology (IT) professional or personal computer (PC) service technician, the CompTIA® A+® Certification course is the first step in your preparation. The course will build on your existing user-level knowledge and experience with personal computer 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, upgrade, repair, configure, troubleshoot, optimize, and perform preventative maintenance of basic personal computer hardware and operating systems.

The CompTIA A+ Certification 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, 2012 objectives (exam numbers 220-801, 220-802), in order to become a CompTIA A+ Certified Professional.

### **Target Student:**

### **Prerequisites:**

Students taking this course should have the following skills: end-user skills with Windows®-based personal computers, including the ability to: browse and search for

information on the Internet; start up, shut down, and log on to a computer and network; run programs; and move, copy, delete, and rename files in Windows Explorer. Students should also have basic knowledge of computing concepts, including the difference between hardware and software; the functions of software components, such as the operating system, applications, and file systems; and the function of a computer network.

An introductory course in a Windows operating system, or equivalent skills and knowledge, is required. Students can take any one of the following Logical Operations courses: Introduction to Personal Computers: Using Windows XP or Introduction to Personal Computers: Using Windows 7.

The following Logical Operations courses are also recommended: Windows XP: Introduction or Microsoft® Windows 7: Level 1.

## **Course Content**

### **Lesson 1: Hardware Fundamentals**

**Topic A: Computer System Components**

**Topic B: Storage Devices**

**Topic C: Device Connections and Interfaces**

### **Lesson 2: Operating System Fundamentals**

**Topic A: Personal Computer Operating Systems**

**Topic B: Windows Control Panel Utilities**

**Topic C: Command Line Tools**

**Topic D: Windows Security Settings**

**Topic E: Windows Operating System Tools**

### **Lesson 3: Operational Procedures**

**Topic A: Basic Maintenance Tools and Techniques**

**Topic B: Electrical Safety**

**Topic C: Environmental Safety and Materials Handling**

**Topic D: Professionalism and Communication**

## **Lesson 4: Peripheral Components**

**Topic A: Install and Configure Display Devices**

**Topic B: Install and Configure Input Devices**

**Topic C: Install and Configure Expansion Cards**

**Topic D: Install and Configure Multimedia Devices**

## **Lesson 5: Managing System Components**

**Topic A: Motherboards**

**Topic B: CPUs and Cooling Systems**

**Topic C: Select and Install Power Supplies**

**Topic D: RAM Types and Features**

**Topic E: Install and Configure Storage Devices**

**Topic F: Configure the System BIOS**

## **Lesson 6: Installing and Configuring Operating Systems**

**Topic A: Implement Virtualization**

**Topic B: Install Microsoft Windows**

**Topic C: Windows Upgrades**

**Topic D: Windows Preventive Maintenance**

## **Lesson 7: Customized Client Environments**

**Topic A: Standard Clients**

**Topic B: Custom Client Environments**

## **Lesson 8: Networking Technologies**

**Topic A: Physical Network Connections**

**Topic B: TCP/IP**

**Topic C: Network Connectivity**

**Topic D: Ports and Protocols**

**Topic E: Set Up and Configure Windows Networking**

**Topic F: Networking Tools**

## **Lesson 9: Installing, Configuring, and Maintaining SOHO Networks**

**Topic A: Install and Configure SOHO Networks**

**Topic B: SOHO Network Security**

## **Lesson 10: Supporting Laptops**

**Topic A: Laptop Hardware and Components**

**Topic B: Install and Configure Laptop Hardware Components**

## **Lesson 11: Mobile Computing**

**Topic A: Mobile Device Technologies**

**Topic B: Configure Mobile Devices**

## **Lesson 12: Supporting Printers**

**Topic A: Printer Technologies**

**Topic B: Install, Configure, and Maintain Printers**

## **Lesson 13: Security**

**Topic A: Security Fundamentals**

**Topic B: Security Threats and Vulnerabilities**

**Topic C: Security Protection Measures**

**Topic D: Workstation Security**

## **Lesson 14: Troubleshooting Hardware Components**

**Topic A: Troubleshooting Theory**

**Topic B: Troubleshoot Video and Display Devices**

**Topic C: Troubleshoot Hard Drives and RAID Arrays**

**Topic D: Troubleshoot System Components**

**Topic E: Troubleshoot Laptops**

**Topic F: Troubleshoot Printers**

## **Lesson 15: Troubleshooting System-Wide Issues**

**Topic A: Troubleshoot Operating Systems**

**Topic B: Troubleshoot Wired and Wireless Networks**

**Topic C: Troubleshoot Common Security Issues**