

CompTIA® A+® Certification: A Comprehensive Approach for All 2009 Exam Objectives (Windows 7)

Course length: 5.0 day(s)

Course Description

Course Objective: You will install, upgrade, repair, configure, optimize, troubleshoot, and perform preventative maintenance on basic personal computer hardware and operating systems.

Target Student: The target student is anyone with basic computer user skills who is interested in obtaining a job as an IT professional or PC technician. In addition, this course will help prepare students to achieve a CompTIA A+ Certification.

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 Element K courses: Introduction to Personal Computers: Using Windows XP or Introduction to Personal Computers: Using Windows 7.

The following Element K courses are additionally recommended: Windows XP: Introduction or Microsoft® Windows 7: Level 1.

Course Objectives

Upon successful completion of this course, students will be able to:

- identify the components of standard desktop personal computers.
- identify fundamental components and functions of personal computer operating systems.
- identify best practices followed by professional personal computer technicians.
- install and configure computer components.
- install and configure system components.
- maintain and troubleshoot peripheral components.
- troubleshoot system components.
- install and configure operating systems.
- maintain and troubleshoot installations of Microsoft Windows.
- identify network technologies.
- install and manage network connections.
- support laptops and portable computing devices.
- support printers.
- identify personal computer security concepts.
- support personal computer security.

Course Content

Lesson 1: Personal Computer Components

Personal Computer Components
System Unit Components
Storage Devices
Personal Computer Connection Methods

Lesson 2: Operating System Fundamentals

Personal Computer Operating Systems
Windows User Interface Components
Windows File System Management
Windows System Management Tools

Lesson 3: PC Technician Professional Best Practices

Tools of the Trade
Electrical Safety
Environmental Safety and Materials Handling
Perform Preventative Maintenance
Diagnostics and Troubleshooting
Professionalism and Communication

Lesson 4: Installing and Configuring Peripheral Components

Install and Configure Display Devices
Install and Configure Input Devices
Install and Configure Adapter Cards
Install and Configure Multimedia Devices

Lesson 5: Installing and Configuring System Components

Install and Configure Storage Devices
Select and Install Power Supplies
Select and Install Memory
Select, Install, and Configure CPUs and Cooling System Units
Install and Configure System Boards

Lesson 6: Maintaining and Troubleshooting Peripheral Components

Troubleshoot Display Devices
Maintain and Troubleshoot Input Devices
Troubleshoot Adapter Cards
Troubleshoot Multimedia Devices

Lesson 7: Troubleshooting System Components

Troubleshoot Storage Devices
Troubleshoot Power Supplies
Troubleshoot Memory
Troubleshoot CPUs and Cooling Systems
Troubleshoot System Boards

Lesson 8: Installing and Configuring Operating Systems

Install Microsoft Windows
Upgrade Windows
Add Devices to Windows
Optimize Windows

Lesson 9: Maintaining and Troubleshooting Microsoft Windows

Operating System Utilities
Back Up Microsoft Windows
Troubleshoot Microsoft Windows
Recover Microsoft Windows

Lesson 10: Network Technologies

Network Concepts
Network Communications
Network Connectivity
Internet Technologies

Lesson 11: Installing and Managing Network Connections

Create Network Connections
Install and Configure Web Browsers
Maintain and Troubleshoot Network Connections

Lesson 12: Supporting Laptops and Portable Computing Devices

Laptop and Portable Computing Device Components
Install and Configure Laptops and Portable Computing Devices
Maintain and Troubleshoot Laptops and Portable Computing Devices

Lesson 13: Supporting Printers

Printer Technologies
Printer Components
Printer Processes
Install and Configure Printers
Maintain and Troubleshoot Printers

Lesson 14: Personal Computer Security Concepts

Security Fundamentals
Security Protection Measures
Data and Physical Security
Wireless Security
Social Engineering

Lesson 15: Supporting Personal Computer Security

Install and Configure Security Measures
Maintain and Troubleshoot Security Measures

Appendix A: Mapping Course Content to the CompTIA A+ Essentials 220-701 Exam Objectives

Appendix B: Mapping Course Content to the CompTIA A+ Practical Application 220-702 Exam Objectives

Appendix C: CompTIA A+ Acronyms

Appendix D: A Brief History of Personal Computers