

CompTIA A+ Certification Essentials Support Skills

Vendor Course Code: G180

Course Length: 5 days

Overview:

This 5-day practical "hands-on" course is the essential foundation for newcomers to PC support. It provides students with the necessary training to ensure proficiency in PC installation and troubleshooting skills. The course has been developed to produce competent PC support engineers who are capable of taking and passing CompTIA's A+ Certification exams or other similar qualifications.

Students will learn the fundamental principles of supporting desktop and portable computers and operating systems plus network and print devices and applications.

This course will prepare students for the 220-701 CompTIA A+ Certification Essentials exam for version 2.0 of the 2009 edition objectives (including Windows 7 content) and is approved under the CompTIA Authorised Quality Curriculum program. A+ Certification is internationally endorsed and recognised as the only benchmark vendor-neutral qualification for PC support and troubleshooting. Indeed, A+ Certification is a prerequisite qualification for employment (and is endorsed) by many leading computer manufacturers and vendors on a global basis.

Skills Gained:

On course completion, students will be able to:

- Identify types and characteristics of PC components, including motherboard, CPU, memory, and storage, input, and output devices.
- Install and configure peripheral devices.
- Identify types and characteristics of portable computers.
- Install and configure Microsoft Windows 2000, Microsoft Windows XP, Microsoft Windows Vista, and Microsoft Windows 7.
- Perform basic PC maintenance and troubleshooting.
- Understand fundamental principles of securing IT systems and working safely.
- Communicate effectively with customers.
- Install and configure print devices.
- Understand fundamental principles of implementing LANs and internet access.

Key Topics:

Module 1 / PC and Notebook Hardware

Types of Computer

- Personal Computers
- Desktop Computers
- Portable Computers
- Units, Signalling, and Circuits

Motherboards

- Motherboard Layout
- Bus Architecture
- Motherboard Components
- Expansion Bus and Adapter Cards
- Motherboard Form Factors
- Power Supply Unit (PSU)
- Cooling Systems

Processors

- Central Processing Unit (CPU)
- Features of CPUs
- Intel Processors
- AMD Processors
- CPU Packaging
- Notebook Processors

Memory

- Memory Types

- Memory Characteristics

Storage Devices

- Storage Devices
- Hard Drives
- Drive Controllers
- Floppy Drives
- Optical Disc Storage
- Flash Memory
- Tape Drives

Input and Peripheral Devices

- I/Ports and Cables
- Input Devices
- I/Devices
- Communications Devices
- Installing and Configuring Peripherals

Video and Sound Devices

- Display Devices
- Video Adapters
- Audio Devices
- Multimedia Input Devices

Module 2 / Operating Systems

Windows Operating System

- What is an Operating System?
- Windows Architecture
- Early Versions of Windows
- Windows 2000
- Windows XP
- Windows Vista
- Windows 7

Managing Windows

- Windows Administrative Tools
- Configuring Hardware
- Screen Savers and Power Management
- Managing Software
- Managing Services
- Windows Registry

Windows Storage Management

- Preparing a Hard Disk
- Navigating Windows
- Working with Folders
- Working with Files
- Searching For Files
- The Recycle Bin
- File and Folder Management in Vista
- File and Folder Management in Windows 7

Installing and Upgrading Windows

- Overview of OS Installations
- Installing Windows from CD /DVD
- Upgrading the OS
- Options for Deploying Windows

Windows Boot Process

- Windows Boot Process
- The BOOT.INI File
- Windows Vista/7 Boot Process
- Configuring Boot Devices
- Advanced Startup Options

Module 3 / Networking and Printing

Network Concepts

- What is a Network?
- The OSI Model

- Network Devices
- Network Transport Protocols
- The Internet

Local, Wireless, and Remote Networks

- Network Cabling
- Wireless Networks
- Accessing the Internet
- My Network Places
- Homegroups

Printers

- The Print Process
- Printer Types
- Installing and Configuring a Printer
- Maintaining Printers

Module 4 / PC Support

Troubleshooting Techniques

- Troubleshooting Models and Processes
- Approaching Troubleshooting
- Troubleshooting Resources

Basic Troubleshooting Scenarios

- Common Hardware Symptoms
- Windows Errors
- Troubleshooting Applications
- Troubleshooting Printers
- Network Troubleshooting Basics

Preventive Maintenance

- Health and Safety
- Static Electricity and ESD
- Materials Handling
- Disposal of Consumables and Computer Equipment
- Physical Inspections
- Patch Management
- Data Backup

Security

- Security Fundamentals
- Access Control
- Authentication
- Accounting
- Social Engineering
- Malware
- Data Security

Professionalism and Communication

- Customer Service Skills
- Communication Skills
- Professionalism
- Handling Customer Complaints

Target Audience:

This course is intended for students wishing to qualify with CompTIA A+ Certification for PC Support professionals. It is also suitable for students wanting to improve their skills in PC support and administration. By completing this course, students will also be assisted with entry into a career in ICT. This course will particularly benefit students pursuing a career in supporting desktop personal computer users, in job roles such as Support Engineer, Maintenance Engineer, Desktop Engineer, Computer Administrator, or PC Support Analyst. Study of the course can also help to prepare for other, similar technical support qualifications and act as groundwork for more advanced training, including CompTIA Network+ or CompTIA Server+, CCNA, MCTS, MCITP and MCSE.

Prerequisites:

Students should have experience using a PC, Windows and browsing the Web. The following key skills are recommended:

- Use a keyboard and mouse.
- Recognise the main components of a PC (such as case, monitor, mouse, and keyboard) and different data media such as floppy disks or CD-ROMs.

- Start the computer and navigate the Desktop.
- Use Windows Explorer to create directories and subdirectories; and move, copy, or rename files and directories.
- Use Internet Explorer to view websites.