

Course overview

CompTIA A+ Certification Essentials Support Skills (2009 Objectives)

(G176eng)



www.gtslearning.com
sales@gtslearning.com

Overview and objectives

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.

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, and Microsoft Windows Vista.
- 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.

Certification track

This course will prepare students for the 220-701 CompTIA A+ Certification Essentials exam for the objectives released in August 2009 and is pending approval under the CompTIA Authorized Quality Curriculum program. A+ Certification is internationally endorsed and recognized 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.



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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, and MCSE / MCSA.

Course prerequisites

Students should have successfully completed the gtslearning course "PC Fundamentals" or have equivalent experience of using a PC, Windows and browsing the Web. The following key skills are recommended:

- Use a keyboard and mouse.
- Recognize 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.

Course contents

The course consists of two volumes, with a study volume, containing indexed notes and review questions, and a companion volume, containing exam objectives mapping, exam information, practical labs, answers to review questions, and a comprehensive glossary. The course also comes with two online practice exams.

An instructor edition of the course is available with margin notes and tips for the trainer. Access to course resources on gtslearning's trainer portal (www.gtstrainer.com) is also available, subject to meeting minimum order requirements. gtstrainer hosts setup guides and data, PowerPoint slides, timetables, and extra exam information.

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Module 1 / PC and Notebook Hardware

- **Types of Computer** • Personal Computers • Desktop Computers • Portable Computers • Units, Signaling, and Circuits
- **Motherboards** • Motherboard Layout • Bus Architecture • Motherboard Components • Expansion Bus and Adapter Cards • Motherboard Form Factors • Power Supply Unit (PSU) • Cooling
- **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 Disk Storage • Flash Memory • Tape Drives
- **Input and Peripheral Devices** • I/O Ports and Cables • Input Devices • I/O 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 • Other Operating Systems
- **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 • My Network Places
- **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 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
- **Printers** • The Print Process • Printer Types • Installing and Configuring a Printer • Maintaining Printers

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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

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