

Course overview

CompTIA A+ Certification Electives Support Skills

(G168eng)



Overview and objectives

This 5-day practical "hands-on" course is the essential foundation for newcomers to PC support. It builds on the skills developed in the companion "CompTIA A+ Certification Essentials Support Skills" course to provide 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.

On course completion, students will be able to:

- Describe PC support industry job roles.
- Manage Windows using command line tools and edit the Registry.
- Use Remote Tools to deploy, maintain, optimize, and troubleshoot systems.
- Use tools to recover or restore a damaged installation.
- Configure and troubleshoot local network and wireless connections.
- Configure and manage users, groups, and shared resources.
- Configure and secure internet connections and web browser software.
- Perform preventative maintenance using approved tools and products.
- Assemble, disassemble, and upgrade PC and notebook components.
- Configure and update BIOS/CMOS.
- Troubleshoot, optimize, and upgrade hardware.
- Troubleshoot and maintain printers and scanners.

Certification track

This course when completed in conjunction with "CompTIA A+ Essentials Support Skills") will prepare students to take one of the CompTIA A+ Certification Elective exams, for the objectives released in September 2006:

- 220-602 CompTIA A+ Certification IT Technician
- 220-603 CompTIA A+ Certification Remote Support Technician
- 220-604 CompTIA A+ Certification Depot Technician

The course has been approved 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 "CompTIA A+ Essentials Support Skills" course or have equivalent previous experience of PC support. Specifically, it is recommended that students have the following skills and knowledge before starting this course:

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

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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.

Module 1 - PC Support Industry

- **IT Technicians** • Remote Support • Depot Technicians • Problem Management • Quality Assurance

Module 2 - Configuring and Troubleshooting the Operating System

- **Using the Command Prompt** • Command Prompt and Text Editors • Navigating Directories at the Command Prompt • File Management using a Command Prompt
- **System Management Tools** • Options for Deploying Windows • Microsoft Management Console • Windows Optimization Tools • Remote Utilities • Windows Registry
- **System Recovery** • Windows Troubleshooting • System Restore • Emergency Repair • Data Backup

Module 3 - Network Support

- **Connectivity and Client Options** • TCP/IP • Configuring Network Properties • Configuring Wireless Connections • Configuring Client Options
- **Sharing Resources** • Local and Domain User Accounts • Creating User Accounts • Planning and Implementing Groups • Setting Share Permissions • NTFS Folder and File Permissions • Encrypting Files and Folders • Auditing
- **Internet Standards and Applications** • Overview of the Internet • Development of the Internet • Internet Services • The World Wide Web • Electronic Mail (Email) • Newsgroups (Usenet) • File Transfer Protocol (FTP) • Telnet • Instant Messaging • Virtual Private Networks • Domain Names • Uniform Resource Indicator • Internet Email Addresses
- **Configuring Internet Access** • Accessing the Internet • Web Browser Security
- **Network Maintenance and Troubleshooting** • Troubleshooting Networks • Testing TCP/IP

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Module 4 - PC Maintenance and Troubleshooting

- **PC Maintenance** • Electrical Circuits • Maintenance Toolkit • Hazards • Preventative Maintenance • Maintaining Display Devices • Maintaining Disk and Tape Drives • Cleaning Inside the Case • Power Problems
- **Installing and Removing Hardware** • Disassembling a PC • Removing Peripheral Devices • Removing Storage Devices • Reassembling the PC • Adding and Removing Notebook Devices
- **BIOS, CMOS, and System Resources** • BIOS and CMOS • BIOS/CMOS Setup Programs • System Resources • Plug-and-Play
- **Troubleshooting and Optimization** • Diagnostic Hardware and Software • Troubleshooting, Upgrading, and Optimizing Hardware
- **Maintaining Printers and Scanners** • Dot Matrix Printers • Inkjet Printers • Laser Printers • Other Printer Types • Scanners • Installing, Maintaining, and Upgrading Printers and Scanners • Printer Troubleshooting • Configuring and Troubleshooting Scanners

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