



A+ Hardware and Software

Description: The A+ training establishes a nationally recognized standard in the competency of service technicians in the computer industry. This training provides the student with a solid foundation in PC hardware and operating system knowledge as well as the hands-on training necessary to succeed in the A+ Certification exam. The A+ Certification affirms that you are capable of assembling a computer, installing operating systems and applications, and successfully troubleshooting them and is an industry exam that is available from authorized testing centers. The A+ Certification Exam by COMPTIA is an industry exam that is available from authorized testing centers.

Lesson 1: Personal Computer Components

Hardware components

- Storage Devices
- Computer Connections

Lesson 2: Operating System

Fundamentals

- Directory and file management
- System Management
- Boot Processes
- System Monitoring and Management
- System Troubleshooting

Lesson 3: PC Technician Professional Best

Practices

- Electricity
- Understanding Static Electricity
- Power supplies
- Safety with computers
- Tools and software for safety

Lesson 4: Installing and Configuring

Peripheral Components

- Display Devices
- Install and configure I/O Devices
- Adapter Cards
- Multimedia Devices

Lesson 5: Installing and Configuring

System Components

- Installing Storage Devices
- Power supplies
- Memory
- System BIOS and CMOS
- Understanding the POST process

Lesson 6: Troubleshooting System

Components

- Troubleshooting Storage Devices
- Trouble shooting Power Supplies
- Troubleshooting Memory
- Troubleshooting CPUs and System Boards

Lesson 7: Installing and Configuring

Operating Systems

- Install Microsoft Windows
- Upgrade Microsoft Windows
- Optimizing Windows

Lesson 8: Maintaining and Troubleshooting

Microsoft Windows

- System Utilities
- Troubleshooting Windows
- System Recovery for Windows



Lesson 9: Networking Technologies

- Network communications
- Internet connections
- Network Installation
- Network Addressing and Gateways
- Network Troubleshooting
- Wired and Wireless Network connections
- Understanding Network Architectures

Lesson 10: Installing and Managing Network Connections

- Creating Network Connections
- Web Browsers
- Troubleshooting Networks

Lesson 11: Supporting Laptops and Portable Computing Devices

- Notebook Computer Components
- Handheld Devices
- Troubleshooting Portable Computing Devices

Lesson 12: Supporting Printers and Scanners

- Printer and Scanner technologies
- Printer and Scanner Components
- Installing Printers and Scanners
- Printer and Scanner processes
- Troubleshooting Printers and Scanners

Lesson 13: Personal Computer Security Concepts

- Security Basics
- OS and Hardware Security
- Physical Security
- Wireless Security

PART II

Lesson 1: IT Technician Professional Best Practices

- Tools of the Trade
- Safety and Environmental Issues
- Professionalism and Communication

Lesson 2: Installing and Configuring Personal Computer Components

- Install and Configure System Boards
- Install and Configure Memory
- Install and Configure Storage Devices
- Install and Configure CPUs
- Install and Configure Power Supplies
- Install and Configure Cooling Systems
- Install and Configure Adapter Cards
- Install and Configure Display Devices
- Install and Configure Input Devices
- Install and Configure Multimedia Devices

Lesson 3: Maintaining and Troubleshooting Personal

- Maintain Personal Computer Components
- Troubleshoot Processors and System Boards
- Troubleshoot Memory
- Troubleshoot Storage Devices
- Troubleshoot Power Supplies
- Troubleshoot Adapter Cards
- Troubleshoot Display Devices
- Troubleshoot Input Devices
- Troubleshoot Multimedia Devices
- Troubleshoot Other Peripheral Devices

Lesson 4: Installing and Troubleshooting Laptops and Portable Devices

- Install and Configure Laptops
- Troubleshoot Laptops and Portable Devices



Lesson 5: Installing, Managing, and Optimizing Operating Systems

- Install and Upgrade Operating Systems
- Operating System Management Utilities
- Manage Disks and File Systems
- Optimize Operating Systems

Lesson 6: Maintaining and Troubleshooting Operating Systems

- Maintain Operating Systems
- Troubleshoot Operating Systems
- Recover Operating Systems

Lesson 7: Installing, Maintaining, and Troubleshooting Printers and Scanners

- Install and Configure Printers and Scanners
- Maintain Printers and Scanners
- Troubleshoot Printers and Scanners

Lesson 8: Networking Technologies

- Network Protocols
- Internet Technologies
- Network Connection Technologies

Lesson 9: Installing and Managing Network Components

- Install and Configure Web Browsers
- Create Network Connections
- Configure Network Resource Sharing
- Maintain and Troubleshoot Networks

Lesson 10: Maintain and Troubleshoot Computer Security

- Security Principles
Install and Configure Security
- Measures
- Maintain and Troubleshoot Security