CompTIA A+

40 Hours

**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.

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 Outline:

**Lesson 1: Personal Computer Components**  
    Topic 1A: Personal Computer Components   
    Topic 1B: System Unit Components   
    Topic 1C: Storage Devices   
    Topic 1D: Personal Computer Connection Methods   
  
**Lesson 2: Operating System Fundamentals**  
    Topic 2A: Personal Computer Operating Systems   
    Topic 2B: Windows User Interface Components   
    Topic 2C: Windows File System Management   
    Topic 2D: Windows System Management Tools   
  
**Lesson 3: PC Technician Professional Best Practices**  
    Topic 3A: Tools of the Trade   
    Topic 3B: Electrical Safety   
    Topic 3C: Environmental Safety and Materials Handling   
    Topic 3D: Perform Preventative Maintenance   
    Topic 3E: Diagnostics and Troubleshooting   
    Topic 3F: Professionalism and Communication   
  
**Lesson 4: Installing and Configuring Peripheral Components**  
    Topic 4A: Install and Configure Display Devices   
    Topic 4B: Install and Configure Input Devices   
    Topic 4C: Install and Configure Adapter Cards   
    Topic 4D: Install and Configure Multimedia Devices   
  
**Lesson 5: Installing and Configuring System Components**  
    Topic 5A: Install and Configure Storage Devices   
    Topic 5B: Select and Install Power Supplies   
    Topic 5C: Select and Install Memory   
    Topic 5D: Select, Install, and Configure CPUs and Cooling System Units   
    Topic 5E: Install and Configure System Boards   
  
**Lesson 6: Maintaining and Troubleshooting Peripheral Components**  
    Topic 6A: Troubleshoot Display Devices   
    Topic 6B: Maintain and Troubleshoot Input Devices   
    Topic 6C: Troubleshoot Adapter Cards   
    Topic 6D: Troubleshoot Multimedia Devices   
  
**Lesson 7: Troubleshooting System Components**  
    Topic 7A: Troubleshoot Storage Devices   
    Topic 7B: Troubleshoot Power Supplies   
    Topic 7C: Troubleshoot Memory   
    Topic 7D: Troubleshoot CPUs and Cooling Systems   
    Topic 7E: Troubleshoot System Boards   
  
**Lesson 8: Installing and Configuring Operating Systems**  
    Topic 8A: Install Microsoft Windows   
    Topic 8B: Upgrade Windows   
    Topic 8C: Add Devices to Windows   
    Topic 8D: Optimize Windows   
  
**Lesson 9: Maintaining and Troubleshooting Microsoft Windows**  
    Topic 9A: Operating System Utilities   
    Topic 9B: Back Up Microsoft Windows   
    Topic 9C: Troubleshoot Microsoft Windows   
    Topic 9D: Recover Microsoft Windows   
  
**Lesson 10: Network Technologies**  
    Topic 10A: Network Concepts   
    Topic 10B: Network Communications   
    Topic 10C: Network Connectivity   
    Topic 10D: Internet Technologies   
  
**Lesson 11: Installing and Managing Network Connections**  
    Topic 11A: Create Network Connections   
    Topic 11B: Install and Configure Web Browsers   
    Topic 11C: Maintain and Troubleshoot Network Connections   
  
**Lesson 12: Supporting Laptops and Portable Computing Devices**  
    Topic 12A: Laptop and Portable Computing Device Components   
    Topic 12B: Install and Configure Laptops and Portable Computing Devices   
    Topic 12C: Maintain and Troubleshoot Laptops and Portable Computing Devices   
  
**Lesson 13: Supporting Printers**  
    Topic 13A: Printer Technologies   
    Topic 13B: Printer Components   
    Topic 13C: Printer Processes   
    Topic 13D: Install and Configure Printers   
    Topic 13E: Maintain and Troubleshoot Printers   
  
**Lesson 14: Personal Computer Security Concepts**  
    Topic 14A: Security Fundamentals   
    Topic 14B: Security Protection Measures   
    Topic 14C: Data and Physical Security   
    Topic 14D: Wireless Security   
    Topic 14E: Social Engineering   
  
**Lesson 15: Supporting Personal Computer Security**  
    Topic 15A: Install and Configure Security Measures   
    Topic 15B: Maintain and Troubleshoot Security Measures

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