

Course Description:

This comprehensive course will build on existing user-level knowledge and experience with personal computer software and hardware to present fundamental skills and concepts that will be used on the job. In this course, you will acquire the essential skills and information you will need to install, upgrade, repair, configure, troubleshoot, optimize, and perform preventative maintenance of basic personal computer hardware and operating systems.

Duration: Instructor-led, group-paced, classroom-delivery learning model with structured hands on activities
35 hours (5 days)

Course Materials: Students will be provided with the following software for use in the classroom:

- Certification lesson guides, workbooks
 - Computer tool kit
- (The above-mentioned materials are yours to keep)*

Objectives: After completing 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 and scanners.
- Identify personal computer security concepts.
- Support personal computer security

Prerequisites: Students taking this course should have the following skills: end-user skills with Windows-based personal computers, including the ability to: Browse and search for information on the Internet; start up and shut down the computer; log on to a computer and computer network; run programs; move, copy, delete, and rename files in Windows Explorer. Basic knowledge of computing concepts, including: difference between hardware and software; functions of software components, such as the operating system, applications, and file systems; and the function of a computer network.

Course Outline

Personal Computer Components

- Personal computer components
- System unit components
- Storage devices
- Personal computer connection methods

Operating System Fundamentals

- Personal computer operating systems
- Windows user interface components
- Windows file system management
- Windows system management tools

PC Technician Professional Best Practices

- Tools of the trade
- Electrical safety
- Environmental safety and materials handling

Maintaining and Troubleshooting Peripheral Components

- Troubleshoot display devices
- Maintain and troubleshoot input devices
- Troubleshoot adapter cards
- Troubleshoot multimedia devices

Troubleshooting System Components

- Troubleshoot storage devices
- Troubleshoot power supplies
- Troubleshoot memory
- Troubleshoot CPUs
- Troubleshoot system boards

Installing and Configuring Operating Systems

- Install Microsoft Windows
- Upgrade Windows
- Add devices to Windows
- Optimize Windows

Maintaining and Troubleshooting Microsoft Windows

- Operating system utilities
- Maintain Microsoft Windows
- Troubleshoot Microsoft Windows
- Recover Microsoft Windows

Network Technologies

- Network concepts
- Network communications
- Network connectivity
- Internet technologies

Installing and Managing Network Connections

- Create network connections
- Install and configure web browsers
- Maintain and troubleshoot network connections

Supporting Laptops and Portable Computing Devices

- Laptop and portable computing device components
- Install and configure laptops and portable computing devices
- Maintain and troubleshoot laptops and portable computing devices

Supporting Printers and Scanners

- Printer and scanner technologies
- Printer and scanner components
- Printer and scanner processes
- Install and configure printers and scanners
- Maintain and troubleshoot printers and scanners



Personal Computer Security Concepts

- Security fundamentals
- Security protection measures
- Data and physical security
- Wireless security
- Social engineering
- Perform preventative maintenance
- Diagnostics and troubleshooting
- Professionalism and communication

Installing and Configuring Peripheral Components

- Install and configure display devices
- Install and configure input devices
- Install and configure adapter cards
- Install and configure multimedia devices

Installing and Configuring System Components

- Install and configure storage devices
- Install and configure power supplies
- Install and configure memory
- Install and configure CPUs
- Install and configure system boards

Supporting Personal Computer Security

- Install and configure security measures
- Maintain and troubleshoot security measures
- Microcomputer electronic components
- The physics of electronics
- Numbering systems
- Tools of the trade
- Electrostatic discharge
- Safety
- Environmental concerns
- Cleaning systems