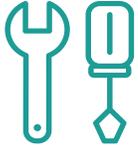


Computer Technician

LEARNING OBJECTIVES



Developed by industry experts, the CareerStep Computer Technician program includes training on everything you'll need to earn your A+ certification through the Computer Technology Industry Association (CompTIA). With CareerStep's affordable pricing, you get quality online training with one-on-one support from dedicated trainers and career support advisors—available by phone, email, and chat every step of the way. The learning objectives outlined below provide a map of the knowledge and skills you'll gain as you complete each module.

Program Orientation (1 Hour)

- Identify the elements, expectations, and requirements of the program.
- Navigate the program using the pages, menus, and buttons provided.
- Use the program tools, including the study planner, gradebook, and completion report.
- See how to contact/communicate with CareerStep via phone, email, forums, chat rooms, and social media.
- Identify and use program-specific resources.

Computing Overview (5 Hours)

- Identify common input/output (I/O) ports by sight.
- Connect common peripherals to standard ports.
- Navigate the Windows 10 interface.
- Navigate the macOS interface.
- Use shell commands.
- Shut down a Linux system.

PC Technician Responsibilities (4 Hours)

- Use an anti-static mat and strap to protect yourself from electrostatic discharge (ESD).
- Implement appropriate grounding procedures.
- Improve your communication and client interaction techniques.
- Go through the change management process to request changes to a project.
- Use a PC toolkit.
- Install an uninterruptible power supply (UPS).
- Configure UPS settings.
- Use a troubleshooting process.

System Components (13 Hours)

- Install a power supply.
- Select an appropriate motherboard and install it in a desktop computer.
- Troubleshoot system power issues.

- Select and install a processor.
- Troubleshoot processor installation.
- Classify and distinguish different types of random access memory (RAM).
- Distinguish between different standards of dynamic random access memory (DRAM).
- Select and install the correct memory module.
- Install triple-channel memory.
- Troubleshoot memory issues.
- Find and edit basic input/output system (BIOS) settings.
- Clear a computer's complementary metal-oxide-semiconductor (CMOS) settings.
- Install an expansion card.
- Select the appropriate video card for a computer system.
- Upgrade a video card.
- Select and install a sound card.
- Understand cooling methods.

Peripheral Devices (5 Hours)

- Understand the various functions of different peripheral devices.
- Connect keyboard, video, and mouse (KVM) to control multiple computers.
- Connect peripheral devices using the appropriate cables and connectors.
- Identify typical USB connectors and ports.
- Connect USB peripheral devices (including storage devices, printers, smartphones).
- Select and install USB devices based on customer requirements.
- Identify digital and analog connectors by sight.
- Select the appropriate display device based on customer requirements and system support.
- Configure display properties (including dual monitor support) in Windows, macOS, and Linux.
- Troubleshoot monitors with no display, monitors

Computer Technician

LEARNING OBJECTIVES

displaying in VGA mode, and monitors with thermal shutdown.

Storage (9 Hours)

- Select the appropriate storage solution.
- Install serial advanced technology attachment (SATA) devices.
- Understand and differentiate optical media types.
- Create RAID storage.
- Implement a RAID solution.
- Understand file systems.
- Create volumes.
- Format and convert drives.
- Mount a partition to a folder.
- Extend existing volumes.
- Implement storage spaces.
- Perform disk cleanup and disk defragmentation.
- Check a hard disk for E24 errors.
- Troubleshoot boot failures.
- Troubleshoot problems with storage device boot priority in the BIOS and unified extensible firmware interface (UEFI).
- Troubleshoot SATA drive issues.
- Optimize Solid State Drive (SSD) storage devices.

Networking (10 Hours)

- Understand networking on a high level.
- Select and install a network adapter.
- Understand ethernet connection, IP Networking.
- Configure transmission control protocol/internet protocol (TCP/IP) settings.
- Configure alternate TCP/IP settings.
- Understand IP Version 6.
- Configure cable, digital subscriber line (DSL), and dial-up internet connections.
- Explore configuration information.
- Use ifconfig.
- Fix a network connection.

Wireless Networking (5 Hours)

- Connect to a wireless network.

- Create a home wireless network.
- Secure a home wireless network.
- Configure a wireless profile.
- Understand the basics of infrared, Bluetooth, and near-field communication (NFC).
- Configure a wireless infrastructure.
- Configure smart devices.
- Troubleshoot wireless networks.

Printing (5 Hours)

- Choose a printer to fulfill the requirements for a given situation.
- Select and install a printer.
- Configure network printing.
- Add a printer.
- Manage printing.
- Maintain a laser printer.
- Troubleshoot and resolve common printing problems.

Mobile Devices (6 Hours)

- Identify notebook external ports and functions.
- Replace the hard disk in a notebook computer.
- Add memory to a notebook.
- Change notebook components such as the keyboard, video card, and other internal components.
- Edit power options and create a power plan for laptops and mobile devices.
- Locate service manuals for notebook systems.
- Perform preventative maintenance on notebook systems.

System Implementation (5 Hours)

- Analyze users' needs prior to purchasing or building a new computer system.
- Customize a computer's hardware to match end-user requirements.
- Select the correct version and edition of Windows for a given implementation.
- Verify system compatibility before upgrading to a newer version of Windows.
- Prepare disks for installation.
- Install a workstation image using PXE.

Computer Technician

LEARNING OBJECTIVES

- Understand post-installation procedures.
- Enable virtualization technology (VT) in the BIOS.
- Create virtual machines and hard disks.

File Management (6 Hours)

- Find system file locations.
- Use libraries.
- Manage files and folders.
- Configure new technology file system (NTFS) permissions.
- Share and secure folders.
- Manage the Linux file system.
- Manage Linux file ownership.

System Management (17 Hours)

- Use Task Manager to view current performance statistics.
- Use Control Panel to configure your system.
- Use system tools to view configuration information for your computer.
- Use prebuilt and custom management consoles to manage your computer.
- View and edit registry settings.
- Manage files, processes, and system settings from the command prompt.

Security (11 Hours)

- Understand security best practices.
- Understand appropriate incident response.
- Configure remote wipe.
- Require a screen saver password.
- Understand how to protect against social engineering.
- Configure BIOS/UEFI security.
- Configure Windows Defender.
- Enforce password setting.

Capstone Exercises (4 Hours)

- Build a computer from scratch.
- Troubleshoot a malfunctioning computer.
- Troubleshoot system startup.
- Create a home office network.
- Configure the windows operating system.

- Troubleshoot a mobile device.
- Configure Linux.

PC Pro Certification Practice (51 Hours)

PC Pro Certification Practice, Single Attempt (2 Hours)

CompTIA A+ 220-1001 Core 1 Certification Practice Exam (12 Hours)

CompTIA A+ 220-1002 Core 2 Certification Practice Exam (11 Hours)