1001-02: CompTIA A+ Certification, part 1 of 13: Fundamentals

Meet the expert: A lifelong fascination with technology led a varied career in technology. I have over 20 years of experience supporting end users, and small businesses. On top of that, I have been an Information Technology instructor for Edmonds Community College, where I instructed on CompTIA’s A+, and Network+ material. During that time I created curriculum for not only those courses, but also for CompTIA’s Security+ certification. I currently hold the following certifications: A+, Network+, Server+, Cloud+, and Project+.

Chuck Nailen has been providing classroom training for more than 16 years. He does training for in department-supported CompTIA curriculums, Microsoft curriculums, and Department of State (DoS) proprietary platforms in support of SAIT and DoS programs. He holds many certifications including National Career Readiness Certificate-Gold Level, MCSA, MCT, MCITP, MCTS, and others.

Prerequisites: This course assumes the user has little to experience with computer hardware or software.

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Course description: In this course for the CompTIA A+ 1001-1002 exam, we will start looking at the basics hardware components, including various Display types, different Input Devices, External Devices, Hard Drives, and many other items. I'll show you how many of these devices are used. We'll look at various ports found on the mother board including legacy items as well as newest connection ports. Then we will cover many topics, including Personal Computer Operating Systems, what Utilities are found in the Windows Control Panel, how to get to the Command Line and what Tools can be used from the Command Line, and how Windows Security Settings can be used to protect the computer. You will have a better understanding how the Windows operating system works, what software tools are used and how to keep it secure.

Course outline:

Computer System Components
- Introduction
- Hardware Fundamentals
- Demo: Motherboard
- Demo: CPUs & RAM
- Demo: System Case & Cards
- The System Bus
- Power Supplies
- Riser Cards
- Firmware
- The System BIOS
- The POST
- Summary

Storage Devices
- Introduction
- Types of Hard Drives
- Optical Disks
- Tape Drives
- Solid State Storage
- M.2 and NMVE Devices
- Types of Solid State Storage
- Demo: Storage Devices
- Summary

Ports
- Introduction
- Ports
- Serial Connections
- USB Connections
- IEEE 1394 and Firewire
- SCSI Connections
- SATA Connections
- Display Cable & Connector Type
- Audio/Video Connections
- Comparing Analog and Digital
- Wireless Device Connections
- Demo: Display Cable Types
- Demo: Drive Cables
- Summary

PC Operating Systems
- Introduction
- Operating System Fundamentals
- Microsoft Windows
- Microsoft Windows Features
- Microsoft Windows 7 Versions
- Windows 10
- Introduction to Windows 10
- Installation Methods
- Supported Network Types
- Important Features
- Other Operating Systems
- Summary

Control Panel
- Introduction
- The Control Panel
- Internet Options
- Display
- User Accounts
- Folder Options
- System
- Action Center
- Windows Firewall
- Power Options
- Windows 7 Control Panel Utils
- Demo: Internet Options
- Demo: Internet Options Con't
- Demo: Display & User Account
- Demo: User Account Con't
- Demo: Folder Options
- Demo: System
- Demo: Action Center
- Demo: Power Options
- Summary

Command Line Tools
- Introduction
- The Command Prompt
- OS Command Line Tools
- Networking Command Line Tools
- The Recovery Console
- WinRE
- Demo: Command Prompt
- Demo: Networking Tools
- Summary

Windows Security Settings
- Introduction
- Types of User Accounts
- User Account Control
- Group Accounts
- System Files and Folders
- Windows Explorer
- Computer/My Computer
- File Extensions
- File Attributes
- Windows File System Types
- Permissions
- NTFS File Permissions
- NTFS Folder Permissions
- Shared Files and Folders
- Share Permissions
- NTFS vs. Share Permissions
- Permissions Considerations
- User Authentication
- Demo: File Permissions
- Demo: Folder Permissions

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• Summary

Windows System Tools
• Introduction
• Administrative Tools
• Demo: Event Viewer
• Demo: Local Security Policy
• Demo: Computer Management
• Demo: Partition
• Demo: Task Manager
• Migration Tools
• The Registry
• Registry Subtrees
• Run Line Utilities
• MSConfig
• Demo: Registry Editor
• Demo: Msconfig
• Summary