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Course Ou

Comprehensive Computer Techni
1001/1002)



04 Mar 2024

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1. Course Objective

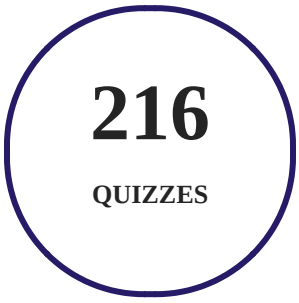
Gain the skills required to pass the CompTIA A+ 1001 and 1002 exams with the Comprehensive Computer Technician (CompTIA A+ 220-1001/1002) course and lab. The lab is versatile and delivers hands-on experience, replacing expensive physical labs. This CompTIA A+ training course covers the CompTIA A+ certification exam objectives and provides expertise to work with mobile devices, networking technology, hardware, installing and configuring operating systems, expanded security, software troubleshooting, and more.

2. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

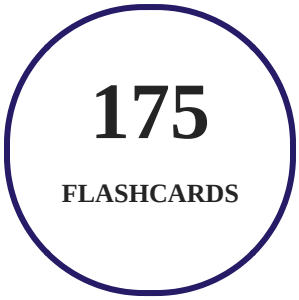
3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.



4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
  1. Best Postsecondary Learning Solution
- **2015**
  1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**
  1. Best Virtual Learning Solution
  2. Best Education Cloud-based Solution
  3. Best College and Career Readiness Solution
  4. Best Corporate / Workforce Learning Solution
  5. Best Postsecondary Learning Content Solution
  6. Best Postsecondary LMS or Learning Platform
  7. Best Learning Relationship Management Solution

- **2017**
  1. Best Overall Education Solution
  2. Best Student Assessment Solution
  3. Best Corporate/Workforce Learning Solution
  4. Best Higher Education LMS or Learning Platform

- **2018**
  1. Best Higher Education LMS or Learning Platform
  2. Best Instructional Solution in Other Curriculum Areas
  3. Best Learning Relationship Management Solution

- **2019**
  1. Best Virtual Learning Solution
  2. Best Content Authoring Development or Curation Solution
  3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Troubleshooting

- Module A: Troubleshooting theory
- Module B: Safety
- Module C: Professionalism
- Summary

Chapter 2: Motherboards and CPUs

- Module A: Motherboards
- Module B: CPUs

- Summary

Chapter 3: Computer power supplies

- Module A: Power supply connectors
- Module B: Power supply installation
- Module C: Power supply troubleshooting
- Summary

Chapter 4: Memory

- Module A: Read-only memory
- Module B: Random access memory
- Summary

Chapter 5: Computer expansion

- Module A: Expansion interfaces
- Module B: Expansion card installation
- Module C: Connectors and cables
- Summary

Chapter 6: Physical storage

- Module A: Disk drives
- Module B: RAID storage
- Module C: Optical drives
- Module D: Other storage methods
- Summary

Chapter 7: Input-output devices

- Module A: Input devices
- Module B: Output devices
- Module C: Dual input-output devices
- Summary

Chapter 8: Display Devices

- Module A: Display technologies
- Module B: Display management
- Summary

Chapter 9: Operating systems

- Module A: Windows versions and features
- Module B: Non-Windows operating systems
- Module C: Operating system installation and upgrades
- Module D: Applications and scripting
- Summary

Chapter 10: Windows management

- Module A: Operating system features and tools
- Module B: Control Panel utilities
- Module C: Command-line tools
- Module D: Troubleshooting
- Summary

Chapter 11: Network basics

- Module A: Classifying networks
- Module B: Network devices
- Module C: Internet connections
- Summary

Chapter 12: Network cables and connectors

- Module A: Twisted-pair connections
- Module B: Coaxial connections
- Module C: Optical media
- Summary

Chapter 13: Network protocols

- Module A: TCP/IP settings
- Module B: Transport protocols
- Module C: Application protocols
- Summary

Chapter 14: Wireless networking

- Module A: Wireless technology
- Module B: Wi-Fi standards
- Summary

Chapter 15: Windows networking

- Module A: Network shares

- Module B: Network connections
- Module C: Connection troubleshooting
- Summary

Chapter 16: Virtualization and cloud computing

- Module A: Virtualization
- Module B: Cloud computing
- Summary

Chapter 17: Mobile devices

- Module A: Mobile device types
- Module B: Mobile device configuration
- Module C: Mobile device troubleshooting
- Summary

Chapter 18: Security principles

- Module A: Threats and vulnerabilities
- Module B: Security controls
- Summary

Chapter 19: Security technologies

- Module A: Operating system security
- Module B: Security hardware and software
- Summary

Chapter 20: Securing devices and data

- Module A: Workstation security
- Module B: Mobile device security
- Module C: Security troubleshooting
- Summary

Chapter 21: SOHO network configuration

- Module A: SOHO router features
- Module B: Network security
- Summary

Chapter 22: Printers and multi-function print devices

- Module A: Printer technologies

- Module B: Printer installation and maintenance
- Module C: Printer troubleshooting
- Summary

Chapter 23: Custom computers

- Module A: Custom computer considerations
- Summary

Chapter 24: Operational procedures

- Module A: IT operations
- Module B: Environmental factors
- Module C: Incident response
- Module D: Backup and recovery
- Summary

Chapter 25: Appendix A

- Exam Objective

Chapter 26: Appendix B

- 3D Objects

Chapter 27: Appendix B

- 3D Objects

Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

100	07:08
VIDEOS	HOURS

11. Practice Test

Here's what you get

89	6	90
PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Motherboards and CPUs

- Installing Motherboard Components

- Installing a PCI Sound Card
- Identifying a PCI-Bus Slot
- Assembling Computer Components
- Installing an Optical Drive and a PCI Sound Card
- Installing a USB 3.0 PCI Express Card (2.0 x4)
- Providing Cooling and Ventilation to a Motherboard
- Identifying a CPU Socket
- Installing a processor

Computer power supplies

- Replacing the Power Supply
- Installing SMPS and Connecting it to the Motherboard
- Replacing the Battery of a Smartphone and Inserting a Memory Card

Memory

- Enabling a Device Driver
- Disabling a Device Driver
- Setting Up a Boot Device Priority
- Enabling Hardware Virtualization
- Accessing BIOS Setup in Windows 10
- Viewing the Processor Information
- Verifying RAM Usage
- Installing Memory Modules

Computer expansion

- Supplying Power to a SATA Drive
- Installing Firewire Cards
- Installing Expansion Cards on a Motherboard
- Installing a NIC
- Connecting a USB Printer to a Computer
- Connecting the Hub with Different Devices Using USB Cables

Physical storage

- Creating a Swap Partition
- Connecting the Motherboard to the Internal Hard Drive
- Inserting a CD on a Laptop
- Copying Files to a Disc Using File Explorer
- Inserting a Pen Drive into the USB Port
- Removing a Pen Drive from a Computer

Input-output devices

- Adding a Keyboard Layout
- Configuring Mouse Settings
- Connecting Speakers to a Computer

Display Devices

- Configuring a Power Plan
- Configuring the Screen Resolution Setting
- Changing the Resolution Setting

Operating systems

- Enabling BranchCache
- Implementing EFS File Sharing
- Displaying Windows Versions
- Adding an MMC snap-in
- Displaying Windows PowerShell snap-ins
- Creating a Restore Point
- Using Cortana
- Using Windows Event Viewer
- Creating and Running a ps1 File
- Executing the Basic Commands through a ps1 File
- Creating Variables
- Creating a Loop in PowerShell
- Using Basic Linux Commands
- Listing Files in a Directory
- Verifying the Working Directory

- Working with Directories
- Performing a Text Search
- Converting a FAT32 Partition to NTFS
- Managing NTFS Permissions
- Disabling a Service

Windows management

- Using MSConfig
- Using Task Manager to Start an Application
- Configuring Windows Defender Firewall
- Converting a Basic Disk to a Dynamic Disk
- Setting Automatic Windows Update
- Viewing the Status of a Disk
- Mounting a Drive to a Folder
- Editing a Drive Letter
- Configuring Computer Management Services
- Observing the Control Panel options in different views
- Uninstalling a Program
- Entering Commands at the Command-line

Network basics

- Configuring VLANs
- Configuring a Router
- Configuring Port Security on an Access Port
- Examining an Intrusion Detection Policy
- Configuring SSH in a Router
- Connecting Systems to the Internet Through a Firewall Router
- Connecting a Router to the Laptop

Network cables and connectors

- Connecting the Cable Modem to Access Internet

Network protocols

- Configuring an IPv4 address
- Configuring an IPv6 address
- Installing a DHCP Server
- Assigning Different Classes of IP Address
- Connecting a Workstation to the LAN and Configuring IPv4 Properties
- Scanning using Wireshark

Windows networking

- Joining Workgroups or Domains
- Changing Network Locations
- Managing Offline Files
- Sharing a Printer
- Sharing Folders
- Using the net Command
- Creating a Dial-up Connection
- Connecting to a Remote Computer using a Remote Desktop Connection
- Creating a Remote Access VPN Connection
- Configuring a Proxy Server
- Using the nbtstat command
- Using the netstat Command
- Using the nslookup Command
- Using the ping Command
- Tracing Route Using Tracert
- Resolving DNS Cache Records Issues

Virtualization and cloud computing

- Installing Ubuntu
- Installing Windows 10
- Using OneDrive
- Configuring OneDrive

Mobile devices

- Removing an Account in Android

- Configuring an Email in Android
- Viewing the iOS Version of an iPhone
- Setting Up a VPN in Android
- Turning on Airplane Mode of an iPhone
- Installing Laptop Components

Security principles

- Reviewing the Top 10 OWASP Attacks
- Conducting a DoS Attack using Smurf Attack
- Performing a MITM Attack
- Conducting IP Spoofing
- Identifying Virus Threats
- Using a Symmetric Encryption Algorithm
- Using an Asymmetric Encryption Algorithm

Security technologies

- Configuring an Audit Group Policy
- Configuring an Account Password Policy
- Stopping Permissions Inheritance
- Propagating Permissions
- Removing a Credential

Securing devices and data

- Configuring Screensavers
- Securing User Accounts
- Creating a New User
- Using BitLocker
- Disabling AutoPlay
- Locking an iPhone with a Password
- Using Windows Security

SOHO network configuration

- Performing Network Address Translation (NAT)
- Configuring a Wireless Access Point (WAP)

Printers and multi-function print devices

- Inserting Ink Cartridges into a Printer
- Installing a Printer

Operational procedures

- Setting Up a Surge Protected Computer System
- Using a UPS to Power the Computer Components and Ensure the Network Connectivity
- Backing up Files
- Restoring Files

Here's what you get

137	128	03:06
LIVE LABS	VIDEO TUTORIALS	HOURS

13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.