

uCertify

Course Outline

OS & Utilities



28 Mar 2024

1. Pre-Assessment
2. Exercises, Quizzes, Flashcards & Glossary
Number of Questions
3. Expert Instructor-Led Training
4. ADA Compliant & JAWS Compatible Platform
5. State of the Art Educator Tools
6. Award Winning Learning Platform (LMS)
7. Chapter & Lessons

Syllabus

Chapter 1: Mobile Devices

Chapter 2: Internet Connectivity, Virtualization, and Cloud Technologies

Chapter 3: Networking

Chapter 4: Introduction to Operating Systems

Chapter 5: Introduction to Scripting

Chapter 6: Advanced Windows

Chapter 7: macOS and Linux Operating Systems

Chapter 8: Computer and Network Security

Videos and How To

8. Practice Test

Here's what you get

Features

9. Live labs

Lab Tasks

Here's what you get

10. Post-Assessment

1. 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.

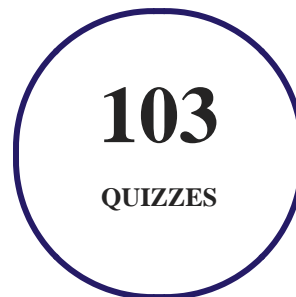
2. Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.



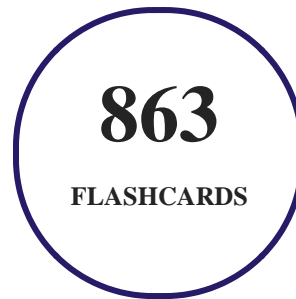
3. Quizzes

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: Mobile Devices

- Mobile Device Overview
- Using Mobile Devices
- Cell Phones
- Mobile Apps
- Mobile Device Wired Connectivity
- Mobile Device Wireless Connectivity
- Mobile Device Email Configuration

- Mobile Device Synchronization and Backup
- Other Mobile Software Tools
- Laptops Overview
- Laptop Hardware
- Laptop Power
- Laptop Repairs Overview
- Laptop Display
- Mobile Device Security
- Mobile Device Travel and Storage
- Mobile Device Troubleshooting Overview
- Soft Skills: A Word About Appearance
- Lesson Summary
- Activities

Chapter 2: Internet Connectivity, Virtualization, and Cloud Technologies

- Internet Connectivity Overview
- Dial-up Overview
- Serial Communication Overview

- Configuring Traditional Serial Devices
- 56 kbps Modems
- Digital Modems and ISDN
- VoIP
- Cable Modems
- xDSL Modems
- Satellite Modems
- Modem Preventive Maintenance
- Mobile Connectivity Overview
- Virtualization Basics
- Cloud Computing
- Web Browsers
- Basic Web Browser Issues
- Soft Skills: Mentoring
- Lesson Summary
- Activities

Chapter 3: Networking

- Networking Overview
- Attaching to Different Types of Networks
- Network Topologies
- Network Media Overview
- Copper Media
- Protecting Your Network and Cable Investment
- Ethernet Concepts
- Ethernet over Power
- The OSI Model
- The TCP/IP Model
- Network Addressing
- More IPv4 Addressing
- Wireless Networks Overview
- Wireless Network Standards
- Bluetooth
- Wireless Network Components
- Wireless Network Design
- Antenna Basics

- End-User Device Configuration Overview
- Adding a Computer to a Windows Domain
- Configuring an End-User Device: Addressing
- Wireless NIC-Specific Settings
- Advanced NIC Properties
- NIC Configuration When Using Virtualization
- Thin or Thick Client Installation Overview
- Wireless AP/Router Basic Configuration
- WWAN Cellular Configuration
- IoT and Smart Devices
- Network Troubleshooting
- Troubleshooting Cable and DSL Modems
- Network Printers
- Network Printer Troubleshooting
- Network Servers
- Embedded and Legacy Systems
- Network Terminology

- The TCP/IP Model in Action
- Using the Network and Sharing Center Section of the Control Panel
- Introduction to Shared Folders
- Network Connectivity
- Soft Skills: Being Proactive
- Lesson Summary
- Activities

Chapter 4: Introduction to Operating Systems

- Operating Systems Overview
- User Interaction with Operating Systems
- Overview of Popular Operating Systems
- 32-bit vs. 64-bit Operating Systems
- Windows 7/8/8.1/10 Versions
- Workstation Operating Systems
- Operating Systems for Mobile Devices
- End-of-Life Concerns
- Update Concerns

- Compatibility Concerns
- Corporate Operating System Needs
- Basic Windows Usage Overview
- Shortcuts and Tiles
- Windows 7 Desktop Components
- Windows Desktop/Start Screen Components
- Windows 10 Desktop Components
- Interactions Within a Window
- Managing Windows Files and Folders
- Searches and Indexing
- Attributes, Compression, and Encryption
- Introduction to Windows Control Panel Utilities
- Determining the Windows Version
- Windows Registry
- Editing the Windows Registry
- Backing Up Data
- Recovering the Windows OS
- WinRE

- Soft Skills: Staying Current
- Lesson Summary
- Activities

Chapter 5: Introduction to Scripting

- Scripting Overview
- Command Prompt Overview
- Command Prompt Basics
- Moving Around from a Command Prompt
- The md and rd Commands
- Two Useful Commands: del and type
- Copying Files
- The attrib Command
- Why Learn Commands?
- PowerShell
- Other Commands You Should Look Over
- Command Format
- Introduction to Scripting

- Script File Types
- Environment Variables
- Script Syntax
- Introduction to Script Programming
- Variables
- Data Types
- Examples of Using Variables
- Comments
- Basic Script Constructs
- Decisions: The Selection Structure
- Compound Conditions and Logical Operators
- Loops: The Repetition Structure
- A Brief Look at VBScript and PowerShell
- Soft Skills: Changing Perspective When Troubleshooting
- Lesson Summary
- Activities

Chapter 6: Advanced Windows

- Advanced Windows Overview
- Preinstallation of Windows
- Installation/Upgrade of Windows
- Corporate Windows Deployment
- Verifying the Installation
- Troubleshooting a Windows Installation
- Reloading Windows
- Windows Updates
- Backing Up the Windows Registry and Data
- Configuring Windows Overview
- Configuring Windows
- Adding Devices
- Installing/Removing Software
- Computer Management Console
- System Tools
- User Account Management
- Managing Storage

- Managing Services and Applications
- Data Sources (ODBC)
- Print Management Console
- Overview of the Windows Boot Process
- Speeding Up the Windows Boot Process
- Troubleshooting the Windows Boot Process
- Black Screen/Video Issues
- Recovery Console
- Advanced Boot Options/Startup Settings Menu
- System Configuration Utility
- Task Manager
- Troubleshooting a Service That Does Not Start
- Slow Boot
- Troubleshooting Windows Network Settings
- Windows Reboots
- Shutdown Problems
- Power Options
- Supporting Windows Computers Remotely

- Preventive Maintenance for Your Operating System
- Soft Skills: Avoiding Burnout
- Lesson Summary
- Activities

Chapter 7: macOS and Linux Operating Systems

- Introduction to macOS
- Navigating the User Interface
- Basic System Usage, Updates, and Backups
- Management and Troubleshooting Tools
- Utilities
- Introduction to Linux
- Navigating the User Interface
- Basic System Usage, Updates, and Backups
- Command-Line Interface
- macOS and Linux Best Practices
- Soft Skills: Be Humble
- Lesson Summary

- Activities

Chapter 8: Computer and Network Security

- Security Overview
- Security Policy
- Physical Security
- Logical Security
- End-User Education
- Protecting Access to Local and Network Resources
- Permissions
- Folder Options
- Protecting the Operating System and Data
- Internet Security
- Parental Controls
- NAT/PAT
- VPN Configuration
- Remote Access to Network Devices
- Internet Appliances

- Wireless Network Security Overview
- Security Incident Reporting
- A Final Word About Security
- Soft Skills: Building Customer Trust
- Lesson Summary
- Activities

Videos and How To

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

13

VIDEOS

02:02

HOURS

11. Practice Test

Here's what you get

130

**PRE-ASSESSMENTS
QUESTIONS**

2

FULL LENGTH TESTS

124

**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

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
- Locking an iPhone with a Password

Internet Connectivity, Virtualization, and Cloud Technologies

- Connecting the Cable Modem to Access Internet
- Installing Ubuntu
- Installing Windows 10
- Using OneDrive
- Configuring OneDrive

Networking

- Configuring an IPv4 address
- Configuring an IPv6 address
- Installing a DHCP Server
- Assigning Different Classes of IP Address
- Scanning using Wireshark
- Connecting a Workstation to the LAN and Configuring IPv4 Properties
- Connecting Systems to the Internet Through a Firewall Router
- Connecting a Router to the Laptop
- Using the nbtstat command
- Using the netstat Command
- Using the nslookup Command

- Using the ping Command
- Tracing Route Using Tracert
- 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

Introduction to Operating Systems

- Executing the Basic Commands through a ps1 File
- Creating Variables
- Creating a Loop in PowerShell
- Creating and Running a ps1 File
- 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
- Configuring Screensavers
- Securing User Accounts
- Creating a New User
- Using BitLocker
- Disabling AutoPlay
- Using a Symmetric Encryption Algorithm
- Using an Asymmetric Encryption Algorithm
- Observing the Control Panel options in different views

- Uninstalling a Program

Advanced Windows

- Enabling a Device Driver
- Disabling a Device Driver
- Setting Automatic Windows Update
- Configuring Computer Management Services
- Editing a Drive Letter
- Mounting a Drive to a Folder
- Converting a Basic Disk to a Dynamic Disk
- Creating a Swap Partition
- Disabling a Service
- Setting Up a Boot Device Priority
- Using MSConfig
- Using Task Manager to Start an Application
- Configuring a Power Plan
- Configuring the Screen Resolution Setting

macOS and Linux Operating Systems

- Listing Files in a Directory
- Verifying the Working Directory
- Working with Directories
- Performing a Text Search
- Using Basic Linux Commands
- Entering Commands at the Command-line

Computer and Network Security

- Using Windows Security
- Reviewing the Top 10 OWASP Attacks
- Conducting a DoS Attack using Smurf Attack
- Performing a MITM Attack
- Conducting IP Spoofing
- Identifying Virus Threats

- Configuring an Audit Group Policy
- Configuring an Account Password Policy
- Managing NTFS Permissions
- Stopping Permissions Inheritance
- Propagating Permissions
- Removing a Credential
- Backing up Files
- Restoring Files
- Configuring Windows Defender Firewall
- Performing Network Address Translation (NAT)
- Configuring VLANs
- Configuring a Router
- Configuring Port Security on an Access Port
- Examining an Intrusion Detection Policy
- Configuring SSH in a Router

Here's what you get

97

LIVE LABS

128

VIDEO TUTORIALS

18:29

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.

GET IN TOUCH:

www.uCertify.com