



# Course Outline

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CompTIA Cybersecurity Analyst  
(CySA+) Course & Labs



Lesson



Practice test



Lab

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## 1. Course Objective

Kick start your prep for the CompTIA CySA CS0-001 certification exam with the CompTIA Cybersecurity Analyst (CySA+) course and performance-based labs. Performance-based labs simulate real-world, hardware, software & command line interface environments and can be mapped to any text-book, course & training. The study guide provides complete coverage of the CS0-001 exam objectives and includes topics such as policy and compliance, forensic analysis, vulnerability scans, identity and access management security, and many more. CompTIA Cybersecurity Analyst CS0-001 certification exam is designed for IT security analysts, vulnerability analysts, or threat intelligence analysts.

## 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. 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.



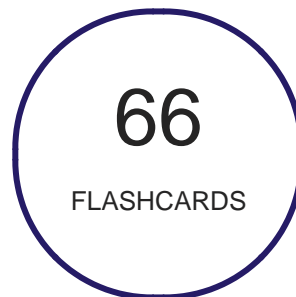
## 4. Quizzes

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.



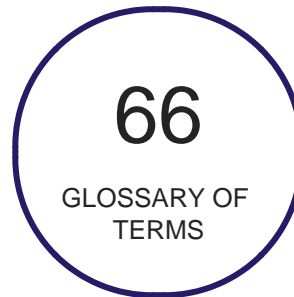
## 5. Flashcards

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.



## 6. 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.



## 7. 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.

## 8. 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.

## 9. 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 assignments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

## 10. 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 5 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

## 11. 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: Introduction

- What Does This Book Cover?
- Setting Up a Kali and Metasploitable Learning Environment
- Setting Up Your Environment
- Objectives Map for CompTIA Cybersecurity Analyst (CySA+) Exam CS0-001

### Chapter 2: Defending Against Cybersecurity Threats

- Cybersecurity Objectives
- Evaluating Security Risks
- Building a Secure Network
- Secure Endpoint Management
- Penetration Testing
- Reverse Engineering
- Summary
- Exam Essentials

- Lab Exercises

### Chapter 3: Reconnaissance and Intelligence Gathering

- Footprinting
- Passive Footprinting
- Gathering Organizational Intelligence
- Detecting, Preventing, and Responding to Reconnaissance
- Summary
- Exam Essentials
- Lab Exercises

### Chapter 4: Designing a Vulnerability Management Program

- Identifying Vulnerability Management Requirements
- Configuring and Executing Vulnerability Scans
- Developing a Remediation Workflow
- Overcoming Barriers to Vulnerability Scanning
- Summary
- Exam Essentials

- Lab Exercises

## Chapter 5: Analyzing Vulnerability Scans

- Reviewing and Interpreting Scan Reports
- Validating Scan Results
- Common Vulnerabilities
- Summary
- Exam Essentials
- Lab Exercises

## Chapter 6: Building an Incident Response Program

- Security Incidents
- Phases of Incident Response
- Building the Foundation for Incident Response
- Creating an Incident Response Team
- Coordination and Information Sharing
- Classifying Incidents

- Summary
- Exam Essentials
- Lab Exercises

## Chapter 7: Analyzing Symptoms for Incident Response

- Analyzing Network Events
- Handling Network Probes and Attacks
- Investigating Host Issues
- Investigating Service and Application Issues
- Summary
- Exam Essentials
- Lab Exercises

## Chapter 8: Performing Forensic Analysis

- Building a Forensics Capability
- Understanding Forensic Software
- Conducting a Forensic Investigation
- Forensic Investigation: An Example

- Summary
- Exam Essentials
- Lab Exercises

## Chapter 9: Recovery and Post-Incident Response

- Containing the Damage
- Incident Eradication and Recovery
- Wrapping Up the Response
- Summary
- Exam Essentials
- Lab Exercises

## Chapter 10: Policy and Compliance

- Understanding Policy Documents
- Complying with Laws and Regulations
- Adopting a Standard Framework
- Implementing Policy-Based Controls

- Security Control Verification and Quality Control
- Summary
- Exam Essentials
- Lab Exercises

## Chapter 11: Defense-in-Depth Security Architectures

- Understanding Defense in Depth
- Implementing Defense in Depth
- Analyzing Security Architecture
- Summary
- Exam Essentials
- Lab Exercises

## Chapter 12: Identity and Access Management Security

- Understanding Identity
- Threats to Identity and Access
- Identity as a Security Layer
- Understanding Federated Identity and Single Sign-On

- Summary
- Exam Essentials
- Lab Exercises

## Chapter 13: Software Development Security

- Understanding the Software Development Life Cycle
- Designing and Coding for Security
- Software Security Testing
- Summary
- Exam Essentials
- Lab Exercises

## Chapter 14: Cybersecurity Toolkit

- Host Security Tools
- Monitoring and Analysis Tools
- Scanning and Testing Tools
- Network Security Tools

- Web Application Security Tools
- Forensics Tools
- Summary

## 12. Practice Test

uCertify provides full length practice tests. These tests closely follow the exam objectives and are designed to simulate real exam conditions. Each course has a number of test sets consisting of hundreds of items to ensure that learners are prepared for the certification exam.

Here's what you get

**85**  
PRE-ASSESSMENTS  
QUESTIONS

**4**  
FULL LENGTH TESTS

**85**  
POST-ASSESSMENTS  
QUESTIONS

## Features

### Full Remediation

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.

### Learn, Test and Review Mode

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.

## 13. Performance Based Labs

uCertify's performance-based labs are simulators that provides virtual environment. Labs deliver hands on experience with minimal risk and thus replace expensive physical labs. uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available
- Videos on how to perform

### Lab Tasks

- Performing reconnaissance on a network

- Identifying search options in Metasploit
- Performing initial scan
- Initiating an SSH session from your Windows 10 client to your Windows Server
- Conducting vulnerability scans
- Consulting a vulnerability database
- Examining the DDOS\_Attack.pcap file
- Retrieving a real-time list of running processes
- Examining the audited events
- Adding revision to the revision history
- Viewing and downloading the policy templates
- Opening the policy template and setting the company name
- Reviewing and modifying the policy items
- Implementing security during the SDLC
- Using Process Explorer to view specific details about running processes on the system
- Making syslog entries readable
- Installing Splunk on the server
- Downloading and running scanning tools
- Acquainting yourself with Wireshark's interface
- Analyzing the capture file to find the attack(s)
- Generating network traffic and using filter
- Confirming the spoofing attack in Wireshark
- Starting a live packet capture

## Here's what you get



## 14. 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.

Have Any Query? We Are Happy To Help!

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