uCertify

Course Outline

Certified Ethical Hacker Version 11



28 Mar 2024

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Here's what you get

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1. Course Objective

Become a certified ethical hacker by passing the CEH v11 exam and gaining Certified Ethical Hacker certification. The Certified Ethical Hacker (CEH v11) course contains interactive chapters and hands-on labs which completely cover CEH v11 exam objectives and will make you aware of the latest tools and techniques used by hackers to lawfully hack an organization.

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.



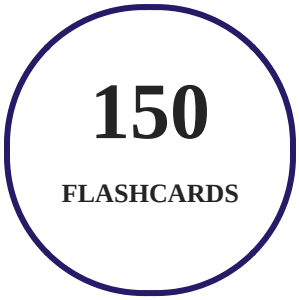
4. Quizzes

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 assessments. 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 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

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

- Goals and Methods
- Who Should Read This course?
- Strategies for Exam Preparation

- How This Course Is Organized

Chapter 2: An Introduction to Ethical Hacking

- Security Fundamentals
- Security Testing
- Cyber Kill Chain
- Hacker and Cracker Descriptions
- Ethical Hackers
- Test Plans—Keeping It Legal
- Ethics and Legality
- Summary
- Review All Key Topics
- Exercises
- Suggested Reading and Resources

Chapter 3: The Technical Foundations of Hacking

- The Hacking Process
- The Ethical Hacker’s Process

- Information Security Systems and the Stack
- Summary
- Review All Key Topics
- Exercises
- Suggested Reading and Resources

Chapter 4: Footprinting, Reconnaissance, and Scanning

- Footprinting
- Scanning
- Summary
- Review All Key Topics
- Exercises
- Suggested Reading and Resources

Chapter 5: Enumeration and System Hacking

- Enumeration
- System Hacking
- Summary
- Review All Key Topics

- Exercise
- Suggested Reading and Resources

Chapter 6: Social Engineering, Malware Threats, and Vulnerability Analysis

- Social Engineering
- Malware Threats
- Vulnerability Analysis
- Summary
- Review All Key Topics
- Command Reference to Check Your Memory
- Exercises
- Suggested Reading and Resources

Chapter 7: Sniffers, Session Hijacking, and Denial of Service

- Sniffers
- Session Hijacking
- Denial of Service and Distributed Denial of Service
- Summary

- Review All Key Topics
- Exercises
- Suggested Reading and Resources

Chapter 8: Web Server Hacking, Web Applications, and Database Attacks

- Web Server Hacking
- Web Application Hacking
- Database Hacking
- Summary
- Review All Key Topics
- Exercise
- Suggested Reading and Resources

Chapter 9: Wireless Technologies, Mobile Security, and Attacks

- Wireless and Mobile Device Technologies
- Wi-Fi
- Summary
- Review All Key Topics
- Suggested Reading and Resources

Chapter 10: Evading IDS, Firewalls, and Honeypots

- Intrusion Detection and Prevention Systems
- Firewalls
- Honeypots
- Summary
- Review All Key Topics
- Suggested Reading and Resources

Chapter 11: Cryptographic Attacks and Defenses

- Cryptography History and Concepts
- Encryption Algorithms
- Public Key Infrastructure
- Email and Disk Encryption
- Cryptoanalysis and Attacks
- Security Protocols and Countermeasures
- Summary
- Review All Key Topics

- Exercises
- Suggested Reading and Resources

Chapter 12: Cloud Computing, IoT, and Botnets

- Cloud Computing
- IoT
- Botnets
- Summary
- Review All Key Topics
- Suggested Reading and Resources

Chapter 13: Final Preparation

- Hands-on Activities
- Suggested Plan for Final Review and Study
- Summary

12. Practice Test

Here's what you get

125	2	125
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.

13.  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

The Technical Foundations of Hacking

- Analyzing Captured Packets Using a Sniffer
- Using the tracert Command

Footprinting, Reconnaissance, and Scanning

- Using Maltego
- Using nslookup
- Using ipconfig to Perform Reconnaissance
- Performing Zone Transfer Using dig
- Using the whois Program
- Using the masscan Command
- Scanning a Port Using nmap

Enumeration and System Hacking

- Enumerating Data Using enum4linux
- Scanning a Network using nbtscan
- Using nmap Scripts for Enumerating Users
- Managing NTFS Permissions
- Cracking Windows Passwords
- Viewing Syslog for Monitoring Logs
- Cracking a Linux Password Using John the Ripper
- Using Rainbow Tables to Crack Passwords

Social Engineering, Malware Threats, and Vulnerability Analysis

- Detecting a Phishing Site Using Netcraft
- Using SET Tool to Plan an Attack
- Observing an SHA-Generated Hash Value

- Scanning Malware Using Antivirus
- Performing Vulnerability Scanning Using OpenVAS
- Conducting Vulnerability Scanning Using Nessus

Sniffers, Session Hijacking, and Denial of Service

- Capturing Network Packets Using tcpdump
- Performing ARP Spoofing
- Spoofing a MAC Address
- Capturing Packets Using Wireshark
- Using Burp Suite
- Simulating a DoS Attack

Web Server Hacking, Web Applications, and Database Attacks

- Grabbing a Screenshot of a Target Machine Using Metasploit
- Exploiting Windows 7 Using Metasploit
- Performing a Memory-Based Attack
- Attacking a Website Using XSS Injection
- Defending Against a Buffer Overflow Attack
- Exploiting a Website Using SQL Injection

Evading IDS, Firewalls, and Honeypots

- Using the hping Program

Cryptographic Attacks and Defenses

- Examining Asymmetric Encryption
- Using OpenSSL to Create a Public/Private Key Pair
- Performing Symmetric Encryption
- Creating PGP Certification
- Hiding Text Using Steganography
- Observing an MD5-Generated Hash Value

Here's what you get

42	42	01:33
LIVE LABS	VIDEO TUTORIALS	HOURS

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.

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