

# uCertify

## Course Outline

### Advanced Penetration Testing with Kali Linux



04 Aug 2025

## 1. Exercises, Quizzes, Flashcards & Glossary

Number of Questions

## 2. Expert Instructor-Led Training

### 3. ADA Compliant & JAWS Compatible Platform

### 4. State of the Art Educator Tools

### 5. Award Winning Learning Platform (LMS)

### 6. Chapter & Lessons

Syllabus

Chapter 1: Preface

Chapter 2: Beginning with Advanced Pen Testing

Chapter 3: Setting up the VAPT Lab

Chapter 4: Active and Passive Reconnaissance Tactics

Chapter 5: Vulnerability Assessment and Management

Chapter 6: Exploiting Computer Network

Chapter 7: Exploiting Web Application

Chapter 8: Exploiting Wireless Network

Chapter 9: Hash Cracking and Post Exploitation

Chapter 10: Bypass Security Controls

Chapter 11: Revolutionary Approaches to Report Writing

Chapter 12: lesson10

Chapter 13: lesson1

Videos and How To

## 1. 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.

## 2. 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.

## 3. 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.

## 4. 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

## 5. 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: Preface

Chapter 2: Beginning with Advanced Pen Testing

- Fundamentals of VAPT
- Advanced penetration testing techniques and strategies
- Business and compliance requirements for VAPT
- Industrial approach and methodology in VAPT
- Security audit standards and frameworks: Best practices
- Pre-engagement interaction with customers

- Designing the Scope of Work for security audits
- Project planning and governance in VAPT
- Delivery and customer success tactics in VAPT
- Conclusion

## Chapter 3: Setting up the VAPT Lab

- Initiating with Kali Linux
- Establishing the virtualization landscape
- Deploying Kali Linux 2023.2
- Arranging network services
- Enabling ProxyChains
- Personalizing Kali Linux
- Refreshing Kali Linux
- Enabling third-party VAPT tools
- Setting up vulnerable machines and applications
- Conclusion

## Chapter 4: Active and Passive Reconnaissance Tactics

- Introduction

- What is reconnaissance
- Passive reconnaissance tools and tactics
- Active reconnaissance tools and tactics
- Additional resources for reconnaissance
- Conclusion

## Chapter 5: Vulnerability Assessment and Management

- Introduction
- Overview of vulnerability assessment
- Vulnerability nomenclature
- Vulnerability management life cycle
- Vulnerability assessment
- Vulnerability management
- Application security
- Conclusion

## Chapter 6: Exploiting Computer Network

- Introduction
- Understanding network pen testing

- Introduction to Metasploit
- Metasploit database and workspace management
- Integrating NMAP scans with Metasploit
- Metasploit automation
- Starting with auxiliary and exploits
- Manual exploitation
- Exploitation using Armitage
- Conclusion

## Chapter 7: Exploiting Web Application

- Introduction
- What is web application pen testing
- Web application pen testing threat modeling
- Web application pen testing mind map
- Detecting web app firewalls and load balancers
- Exploiting application-specific vulnerabilities
- Business logic flaws
- Conclusion

## Chapter 8: Exploiting Wireless Network

- Introduction
- Introduction to wireless pentesting
- Wireless network fundamentals
- Wireless security threats and standards
- Wireless pen testing methodology
- Wireless pen testing tools
- Configuring Kali Linux for wireless pentesting
- Wireless network exploitation techniques
- Advanced wireless attacks
- Conclusion

## Chapter 9: Hash Cracking and Post Exploitation

- Exploring hash functions
- Mastering password hashing
- Unleashing hash cracking techniques
- Empowering hash cracking arsenal
- Difference between hashing, encryption and encoding
- Post exploitation and lateral movement

- Privilege escalation techniques
- Exploring network pivoting
- Persistence and lateral movement
- Unleashing the power of Mimikatz in meterpreter
- Conclusion

## Chapter 10: Bypass Security Controls

- Introduction
- Significance of bypassing security controls
- Advancements in security controls
- Security control bypass in network recon
- Outsmarting Windows Defender
- Antivirus evasion techniques and tools
- Cutting-edge WAF evasion tactics
- Evolving social engineering tactics
- Conclusion

## Chapter 11: Revolutionary Approaches to Report Writing

- Introduction

- Overview of report writing
- Components of well-crafted reports
- Risk assessment and prioritization
- Utilizing CVSS scores
- Types of cybersecurity assessment reports
- Examples of detailed reports
- Automated vulnerability management with DefectDojo
- Conclusion

Chapter 12: lesson10

Chapter 13: lesson1

You can't stay away! Get



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