uCertify

# Course Outline

## A Practical Guide to Computer Forensics Investigations




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1. Course Objective
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3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
7. Award Winning Learning Platform (LMS)
8. Chapter & Lessons

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   Chapter 3: Windows Operating and File Systems

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   Chapter 5: Acquiring Evidence in a Computer Forensics Lab

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## 1. Course Objective

Enroll yourself in A Practical Guide to Computer Forensics Investigations course and lab to know about computer forensics investigation. The lab provides a hands-on learning experience in a safe and online environment. The computer forensics training course provides skills on topics such as network, mobile, and photograph forensics, online investigations, and many more. The Computer Forensics course offers hands-on activities, numerous case studies, and practical applications of computer forensic techniques.

## 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: Introduction

### Chapter 2: The Scope of Computer Forensics

- Introduction
- Types of Computer Forensics Evidence Recovered
- What Skills Must a Computer Forensics Investigator Possess?
- The Importance of Computer Forensics
- A History of Computer Forensics
- Training and Education

- Summary
- Assessment

## Chapter 3: Windows Operating and File Systems

- Introduction
- Physical and Logical Storage
- File Conversion and Numbering Formats
- Operating Systems
- Windows Registry
- Microsoft Windows Features
- Summary
- Assessment

## Chapter 4: Handling Computer Hardware

- Introduction
- Hard Disk Drives
- Cloning a PATA or SATA Hard Disk
- Removable Memory
- Summary

- Assessment
- References

## Chapter 5: Acquiring Evidence in a Computer Forensics Lab

- Introduction
- Lab Requirements
- Private Sector Computer Forensics Laboratories
- Computer Forensics Laboratory Requirements
- Extracting Evidence from a Device
- Skimmers
- Summary
- Assessment

## Chapter 6: Online Investigations

- Introduction
- Working Undercover
- Website Evidence
- Background Searches on a Suspect

- Online Crime
- Capturing Online Communications
- Summary
- Assessment

## Chapter 7: Documenting the Investigation

- Introduction
- Obtaining Evidence from a Service Provider
- Documenting a Crime Scene
- Seizing Evidence
- Documenting the Evidence
- Using Tools to Document an Investigation
- Writing Reports
- Using Expert Witnesses at Trial
- Summary
- Assessment

## Chapter 8: Admissibility of Digital Evidence

- Introduction

- History and Structure of the United States Legal System
- Evidence Admissibility
- Constitutional Law
- When Computer Forensics Goes Wrong
- Structure of the Legal System in the European Union (E.U.)
- Structure of the Legal System in Asia
- Summary
- Assessment

## Chapter 9: Network Forensics

- Introduction
- The Tools of the Trade
- Networking Devices
- Understanding the OSI Model
- Advanced Persistent Threats
- Investigating a Network Attack
- Summary
- Assessment

## Chapter 10: Mobile Forensics

- Introduction
- The Cellular Network
- Handset Specifications
- Mobile Operating Systems
- Standard Operating Procedures for Handling Handset Evidence
- Handset Forensics
- Manual Cellphone Examinations
- Global Satellite Service Providers
- Legal Considerations
- Other Mobile Devices
- Summary
- Assessment

## Chapter 11: Photograph Forensics

- Introduction
- Understanding Digital Photography

- Examining Picture Files
- Evidence Admissibility
- Case Studies
- Summary
- Assessment

## Chapter 12: Mac Forensics

- Introduction
- A Brief History
- Macintosh File Systems
- Forensic Examinations of a Mac
- Macintosh Operating Systems
- Apple Mobile Devices
- Case Studies
- Summary
- Assessment

## Chapter 13: Case Studies

- Introduction
- Zacharias Moussaoui
- BTK (Bind Torture Kill) Killer
- Cyberbullying
- Sports
- Summary
- Assessment
- Assessment of Cases by Judges

## Videos and How To

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

| 90 | 13:21 |
| --- | --- |
| VIDEOS | HOURS |

## 11. 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

| 100 | 100 |
| --- | --- |
| PRE-ASSESSMENTS QUESTIONS | POST-ASSESSMENTS QUESTIONS |

## Features

uCertify provides video training courses that contain videos and test set questions based on the exam. These courses are interactive and engaging and the learners can view the content at their own pace, in their own time, and on any device. Learners can easily track the engagement levels so they immediately know which course components are easy to understand and which are more difficult. Test set in the courses closely follow the exam objectives and are designed to simulate real exam conditions.

Each pre and post assessment comes with interactive questions which help users in better understanding of the subject matter.

### 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

**Windows Operating and File Systems**

- Using a Hex Editor
- Using FTK Imager
- Exploring Windows File Registry
- Using the Disk Defragmenter
- Using Event Viewer

**Handling Computer Hardware**

- Reading the Contents of a Secure Digital Card

**Acquiring Evidence in a Computer Forensics Lab**

- Imaging RAM using FTK Imager

**Online Investigations**

- Using a Numeric IP Address to Locate a Web Server
- Printing the Screen Using MAC

**Mobile Forensics**

- Locating Local Cell Towers and Antennae
- Viewing the IMEI through the keypad
- Identifying the Features of a Cellular Phone

**Mac Forensics**

- Converting Epoch Time
- Working in the Terminal window

## Here's what you get

| 14 | 15 |
|---|---|
| LIVE LABS | VIDEO TUTORIALS |

## 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.

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