

# uCertify

## Course Outline

**Certified Secure Software Lifecycle Professional  
(CSSLP)**



10 May 2024

1. Course Objective
2. Pre-Assessment
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 2: Core Concepts  
Chapter 3: Security Design Principles  
Chapter 4: Define Software Security Requirements  
Chapter 5: Identify and Analyze Compliance Requirements  
Chapter 6: Misuse and Abuse Cases  
Chapter 7: Secure Software Architecture  
Chapter 8: Secure Software Design  
Chapter 9: Secure Coding Practices  
Chapter 10: Analyze Code for Security Risks  
Chapter 11: Implement Security Controls  
Chapter 12: Security Test Cases  
Chapter 13: Security Testing Strategy and Plan  
Chapter 14: Software Testing and Acceptance  
Chapter 15: Secure Configuration and Version Control  
Chapter 16: Software Risk Management  
Chapter 17: Secure Software Deployment  
Chapter 18: Secure Software Operations and Maintenance

Chapter 19: Software Supply Chain Risk Management

Chapter 20: Supplier Security Requirements

Videos and How To

9. Practice Test

Here's what you get

Features

10. Post-Assessment

## 1. Course Objective

Elevate your skills in software development and make security your top priority with the Certified Secure Software Lifecycle Professional (CSSLP) course. In today's digital landscape, ensuring the security of software is paramount, and this course equips you with the knowledge and skills to lead in the development of secure software. From interactive lessons to practice tests and pre-assessments, we've got your exam preparation covered. Explore topics like software vulnerabilities and the principles of secure software development, making a real impact on reducing risks and costs. Become part of a workforce with an enhanced skillset and embark on a journey toward creating more secure software and a safer digital world. Unleash your potential with CSSLP and contribute to a more secure software development process.

## 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.

**447**  
EXERCISES

## 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.

**185**

**QUIZZES**

## 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.

**246**

**FLASHCARDS**

## 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.

**246**

**GLOSSARY OF  
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

- Why Focus on Software Development?
- The Role of CSSLP
- How to Use This Course



- The Examination
- Exam Objective Map
- CSSLP Version 3 (2020)

## Chapter 2: Core Concepts

- Confidentiality
- Integrity
- Availability
- Authentication
- Authorization
- Accountability (Auditing and Logging)
- Nonrepudiation
- Secure Development Lifecycle
- Secure Development Lifecycle Components
- Lesson Review

## Chapter 3: Security Design Principles

- System Tenets

- Secure Design Tenets
- Security Models
- Adversaries
- Lesson Review

## Chapter 4: Define Software Security Requirements

- Functional Requirements
- Operational and Deployment Requirements
- Connecting the Dots
- Lesson Review

## Chapter 5: Identify and Analyze Compliance Requirements

- Regulations and Compliance
- Data Classification
- Privacy
- Lesson Review

## Chapter 6: Misuse and Abuse Cases

- Misuse/Abuse Cases

- Requirements Traceability Matrix
- Software Acquisition
- Lesson Review

## Chapter 7: Secure Software Architecture

- Perform Threat Modeling
- Define the Security Architecture
- Lesson Review

## Chapter 8: Secure Software Design

- Performing Secure Interface Design
- Performing Architectural Risk Assessment
- Model (Nonfunctional) Security Properties and Constraints
- Model and Classify Data
- Evaluate and Select Reusable Secure Design
- Perform Security Architecture and Design Review
- Define Secure Operational Architecture
- Use Secure Architecture and Design Principles, Patterns, and Tools
- Lesson Review

## Chapter 9: Secure Coding Practices

- Declarative vs. Imperative Security
- Memory Management
- Error Handling
- Interface Coding
- Primary Mitigations
- Learning from Past Mistakes
- Secure Design Principles
- Interconnectivity
- Cryptographic Failures
- Input Validation Failures
- General Programming Failures
- Technology Solutions
- Lesson Review

## Chapter 10: Analyze Code for Security Risks

- Code Analysis (Static and Dynamic)

- Code/Peer Review
- Code Review Objectives
- Additional Sources of Vulnerability Information
- CWE/SANS Top 25 Vulnerability Categories
- OWASP Vulnerability Categories
- Common Vulnerabilities and Countermeasures
- Lesson Review

## Chapter 11: Implement Security Controls

- Security Risks
- Implement Security Controls
- Applying Security via the Build Environment
- Anti-tampering Techniques
- Defensive Coding Techniques
- Primary Mitigations
- Secure Integration of Components
- Lesson Review

## Chapter 12: Security Test Cases

- Security Test Cases
- Attack Surface Evaluation
- Penetration Testing
- Common Methods
- Lesson Review

## Chapter 13: Security Testing Strategy and Plan

- Develop a Security Testing Strategy and a Plan
- Functional Security Testing
- Nonfunctional Security Testing
- Testing Techniques
- Environment
- Standards
- Crowd Sourcing
- Lesson Review

## Chapter 14: Software Testing and Acceptance

- Perform Verification and Validation Testing

- Identify Undocumented Functionality
- Analyze Security Implications of Test Results
- Classify and Track Security Errors
- Secure Test Data
- Lesson Review

## Chapter 15: Secure Configuration and Version Control

- Secure Configuration and Version Control
- Define Strategy and Roadmap
- Manage Security Within a Software Development Methodology
- Identify Security Standards and Frameworks
- Define and Develop Security Documentation
- Develop Security Metrics
- Decommission Software
- Report Security Status
- Lesson Review

## Chapter 16: Software Risk Management

- Incorporate Integrated Risk Management

- Promote Security Culture in Software Development
- Implement Continuous Improvement
- Lesson Review

## Chapter 17: Secure Software Deployment

- Perform Operational Risk Analysis
- Release Software Securely
- Securely Store and Manage Security Data
- Ensure Secure Installation
- Perform Post-Deployment Security Testing
- Lesson Review

## Chapter 18: Secure Software Operations and Maintenance

- Obtain Security Approval to Operate
- Perform Information Security Continuous Monitoring
- Support Incident Response
- Perform Patch Management
- Perform Vulnerability Management



- Runtime Protection
- Support Continuity of Operations
- Integrate Service Level Objectives and Service Level Agreements
- Lesson Review

## Chapter 19: Software Supply Chain Risk Management

- Implement Software Supply Chain Risk Management
- Analyze Security of Third-Party Software
- Verify Pedigree and Provenance
- Lesson Review

## Chapter 20: Supplier Security Requirements

- Ensure Supplier Security Requirements in the Acquisition Process
- Support Contractual Requirements
- Lesson Review

## 12. Practice Test

**Here's what you get**

**100**

**PRE-ASSESSMENTS  
QUESTIONS**

**2**

**FULL LENGTH TESTS**

**100**

**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. 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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