

CSCSD: Secure SDLC & Input Validation

2 Days

16 HOURS

7

MODULES

39

TOPICS

COURSE OVERVIEW

The Certified Secure Coding for Software Developers (CSCSD) course is a comprehensive training program designed to equip software developers with the essential principles and practices for writing secure code. The course provides an in-depth understanding of security threats and how to mitigate them throughout the software development lifecycle. Module 1 kicks off with an introduction to the course, setting the stage for the importance of secure coding. Module 2 delves into core security concepts such as Confidentiality, Integrity, Availability, and Non-repudiation, emphasizing the importance of Data anonymization, User consent, and Disposition. In Module 3, learners explore the Secure Development Lifecycle, comparing methodologies like Waterfall and Agile, and examining frameworks like the Microsoft SDLC, Touchpoints, and CLASP. Module 4 focuses on Security Design Principles, teaching developers to apply concepts like Least privilege, Defense in depth, and Fail-safe to prevent vulnerabilities. Finally, Module 5 addresses Secure Development Principles, stressing the importance of Canonicalization, Output encoding, and secure practices for Authentication & authorization, Auditing & logging, and maintaining Secure communications. Learners who complete the CSCSD course will be equipped to write safer, more secure code, reducing the risk of security breaches and enhancing the overall security posture of their software applications.

WHO THIS COURSE IS FOR

The Certified Secure Coding for Software Developers (CSCSD) course focuses on security principles and practices for building robust, secure applications.

Software Developers

Application Programmers

Security Analysts

Software Architects

Systems Engineers

IT Security Consultants

Software Auditors

Quality Assurance specialists

Project Managers (with a technical background)

What You Will Learn

- Explain core security concepts such as confidentiality and integrity
- Compare secure development lifecycle methodologies such as Agile
- Describe frameworks including Microsoft SDLC, Touchpoints and CLASP
- Apply security design principles such as least privilege
- Apply canonicalization and output encoding to prevent vulnerabilities
- Implement authentication, authorization and auditing controls
- Evaluate secure communications and secure storage practices
- Assess input validation and error handling techniques

COURSE SYLLABUS

7 Modules, 39 Topics

01

Introduction

TOPICS

Disclaimer · Trends & Metrics · Lab Environment

02

Core Security Concepts

TOPICS

- Confidentiality, Integrity, and Availability
- Authentication and Authorization
- Accounting
- Non-repudiation
- Privacy
- Data Anonymization
- User Consent
- Data Disposition
- Test Data Management

03

Secure Development Lifecycle

TOPICS

- Waterfall vs. Agile
- Microsoft SDLC
- Touchpoints
- CLASP (Comprehensive, Lightweight Application Security Process)
- Lifecycle Comparison

04

Security Design Principles

TOPICS

- Least Privilege
- Separation of Duties
- Defense in Depth
- Fail-Safe Defaults
- Economy of Mechanism
- Complete Mediation
- Open Design
- Least Common Mechanism
- Psychological Acceptability
- Weakest Link Principle
- Leveraging Existing Components

05

Secure Development Principles

TOPICS

- Input Validation
- Canonicalization
- Output Encoding
- Error Handling
- Authentication & Authorization
- Auditing & Logging
- Session Management
- Secure Communications
- Secure Resource Access
- Secure Storage
- Cryptography

06

Best Practices

07

Conclusion

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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✉ info@koenig-solutions.com