Certified Secure Coding for Software Developers (CSCSD)

Course Outline

1. Introduction
a. Disclaimer
b. Trends & Metrics
c. Lab Environment

2. Core Security Concepts
a. Confidentiality, Integrity, Availability
b. Authentication and Authorisation
c. Accounting
d. Non-repudiation
e. Privacy
f. Data Anonymisation
g. User Consent
h. Disposition
i. Test Data Management

3. Secure Development Lifecycle
a. Waterfall vs Agile
b. Microsoft SDLC
c. TouchPoints
d. CLASP
e. Comparison

4. Security Design Principles
a. Least Privilege
b. Separation of Duties
c. Defence in Depth
d. Fail Safe
e. Economy of Mechanism
f. Complete Mediation
g. Open Design
h. Least Common Mechanism
i. Psychological Acceptability
j. Weakest Link
k. Leveraging Existing Components

5. Secure Development Principles

a. Input Validation

b. Canonicalisation

c. Output Encoding

d. Error Handling

e. Authentication & Authorisation

f. Auditing & Logging

g. Session Management

h. Secure Communications

i. Secure Resource Access

j. Secure Storage

k. Cryptography

6. Best Practices

7. Conclusion