

Cyberyami Certified Secure Coding Expert (C|CSCE)

Course Outline

1. INTRODUCTION

- Disclaimer
- Trends & Metrics
- Lab Environment

2. CORE SECURITY CONCEPTS

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

3. SECURE DEVELOPMENT LIFECYCLE

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

4. SECURITY DESIGN PRINCIPLES

- 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

5. SECURE DEVELOPMENT PRINCIPLES

- Input Validation
- Canonicalization
- Output Encoding
- Error Handling
- Authentication & Authorization

- Auditing & Logging
- Session Management
- Secure Communications
- Secure Resource Access
- Secure Storage
- Cryptography

6. BEST PRACTICES

7. CONCLUSION

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