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ERIC REED
CYBERSECURITY TRAINING

CEH v12 Course Outline

1 - Introduction to Ethical Hacking

- Information Security Overview
- Cyber Kill Chain Concepts
- Hacking Concepts
- Ethical Hacking Concepts
- Information Security Controls
- Information Security Laws and Standards

2 - 2 - Foot-printing and Reconnaissance

- Footprinting Concepts
- Footprinting through Search Engines
- Footprinting through Web Services
- Footprinting through Social Networking Sites
- Website Footprinting
- Email Footprinting
- Who is Footprinting
- DNS Footprinting
- Network Footprinting
- Footprinting through Social Engineering
- Footprinting Tools
- Footprinting Countermeasures

3 - Scanning Networks

- Network Scanning Concepts
- Scanning Tools
- Host Discovery
- Port and Service Discovery
- OS Discovery (Banner Grabbing/OS Fingerprinting)
- Scanning Beyond IDS and Firewall
- Draw Network Diagrams

4 - Enumeration

- Enumeration Concepts
- NetBIOS Enumeration
- SNMP Enumeration
- LDAP Enumeration
- NTP and NFS Enumeration
- SMTP and DNS Enumeration
- Other Enumeration Techniques
- Enumeration Countermeasures

5 - Vulnerability Analysis

- Vulnerability Assessment Concepts

- Vulnerability Classification and Assessment Types
- Vulnerability Assessment Solutions and Tools
- Vulnerability Assessment Reports

6 - System Hacking

- System Hacking Concepts
- Gaining Access
- Escalating Privileges
- Maintaining Access
- Clearing Logs

7 - Malware Threats

- Malware Concepts
- APT Concepts
- Trojan Concepts
- Virus and Worm Concepts
- Fileless Malware Concepts
- Malware Analysis
- Countermeasures
- Anti-Malware Software

8 - Sniffing

- Sniffing Concepts
- Sniffing Technique: MAC Attacks
- Sniffing Technique: DHCP Attacks
- Sniffing Technique: ARP Poisoning
- Sniffing Technique: Spoofing Attacks
- Sniffing Technique: DNS Poisoning
- Sniffing Tools
- Countermeasures
- Sniffing Detection Techniques

9 - Social Engineering

- Social Engineering Concepts
- Social Engineering Techniques
- Insider Threats
- Impersonation on Social Networking Sites
- Identity Theft
- Countermeasures

10 - Denial-of-Service

- DoS/DDoS Concepts
- DoS/DDoS Attack Techniques
- BotnetsDDoS Case Study
- DoS/DDoS Attack Tools
- Countermeasures
- DoS/DDoS Protection Tools

11 - Session Hijacking

- Session Hijacking Concepts
- Application Level Session Hijacking
- Network Level Session Hijacking
- Session Hijacking Tools

- Countermeasures

12 - Evading IDS, Firewalls, and Honeypots

- IDS, IPS, Firewall, and Honeypot Concepts
- IDS, IPS, Firewall, and Honeypot Solutions
- Evading IDS
- Evading Firewalls
- IDS/Firewall Evading Tools
- Detecting Honeypots
- IDS/Firewall Evasion Countermeasures

13 - Hacking Web Servers

- Web Server Concepts
- Web Server Attacks
- Web Server Attack Methodology
- Web Server Attack Tools
- Countermeasures
- Patch Management
- Web Server Security Tools

14 - Hacking Web Applications

- Web Application Concepts
- Web Application Threats
- Web Application Hacking Methodology
- Web API, Webhooks, and Web Shell
- Web Application Security

15 - SQL Injection

- SQL Injection Concepts
- Types of SQL Injection
- SQL Injection Methodology
- SQL Injection Tools
- Evasion Techniques
- Countermeasures

16 - Hacking Wireless Networks

- Wireless Concepts
- Wireless Encryption
- Wireless Threats
- Wireless Hacking Methodology
- Wireless Hacking Tools
- Bluetooth Hacking
- Countermeasures
- Wireless Security Tools

17 - Hacking Mobile Platforms

- Mobile Platform Attack Vectors
- Hacking Android OS
- Hacking iOS
- Mobile Device Management
- Mobile Security Guidelines and Tools

18 - IoT and OT Hacking

- IoT Hacking
- IoT Concepts
- IoT Attacks
- IoT Hacking Methodology
- IoT Hacking Tools
- Countermeasures
- OT Hacking
- OT Concepts
- OT Attacks
- OT Hacking Methodology
- OT Hacking Tools
- Countermeasures

19 - Cloud Computing

- Cloud Computing Concepts
- Container Technology
- Serverless Computing
- Cloud Computing Threats
- Cloud Hacking
- Cloud Security

20 - Cryptography

- Cryptography Concepts
- Encryption Algorithms
- Cryptography Tools
- Public Key Infrastructure (PKI)
- Email Encryption
- Disk Encryption
- Cryptanalysis
- Countermeasures