

Cyber Security and Ethical Hacking - Curriculum

Sl.No	Topic
1	Networking : Introduction To Networking
1.1	TYPES OF NETWORKS
1.2	BASIC TERMINOLOGIES
1.3	OSI MODEL
1.4	PROTOCOLS
1.5	COMMON PROTOCOLS AND PORTS
2	Linux : INSTALLING KALI LINUX
2.1	LINUX BASIC COMMANDS
2.2	INTERMEDIATE COMMANDS
2.3	LINUX DIRECTORY & FILE PERMISSIONS
2.4	LINUX UTILITIES
3	Introduction to Ethical Hacking:
3.1	Information Security Overview
3.2	Cyber Kill Chain Concepts
3.3	Hacking Concepts
3.4	Ethical Hacking Concepts
3.5	Information Security Controls
3.6	Information Security Laws and Standards
4	Footprinting and Reconnaissance
4.1	Footprinting Methodology
4.2	Footprinting through Search Engines
4.3	Footprinting through Web Services
4.4	Footprinting through Social Networking Sites
4.5	Website Footprinting
4.6	Email Footprinting
4.7	Whois Footprinting
4.8	DNS Footprinting
4.9	Network Footprinting

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Sl.No	Topic
5	Scanning Networks
5.1	Network Scanning Concepts
5.2	Scanning Tools
5.3	Host Discovery
5.4	Port and Service Discovery
5.5	OS Discovery
5.6	Scanning Beyond IDS and Firewall
6	Enumeration
6.1	Enumeration Concepts
6.2	NetBIOS Enumeration
6.3	SNMP Enumeration
6.4	LDAP Enumeration
6.5	NTP and NFS Enumeration
6.6	SMTP and DNS Enumeration
7	System Hacking
7.1	System Hacking Concepts
7.2	Gaining Access
7.3	Cracking Passwords
7.4	Vulnerability Exploitation
7.5	Escalating Privileges
7.6	Maintaining Access
7.7	Executing Applications
7.8	Hiding Files
8	Denial-of-Service
8.1	DoS/DDoS Concepts
8.2	DoS/DDoS Attack Techniques
8.3	Botnets
8.4	DDoS
8.5	Case Study
8.6	DoS/DDoS Attack Tools

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Sl.No	Topic
9	Evading IDS, Firewalls, and Honeypots
9.1	IDS, IPS, Firewall, and Honeypot Concepts
9.2	IDS, IPS, Firewall, and Honeypot Solutions
9.3	Evading IDS
9.4	Evading Firewalls
9.5	IDS/Firewall Evading Tools
9.6	Detecting Honeypots
9.7	IDS/Firewall Evasion Countermeasures
10	Hacking Web Applications
10.1	Web App Concepts
10.2	Web App Threats
10.3	Web App Hacking Methodology
10.4	Footprint Web Infrastructure
10.5	Analyze Web Applications
10.6	OWASP TOP 10
11	System Hacking
11.1	Wireless Concepts
11.2	Wireless Encryption
11.3	Wireless Threats
11.4	Wireless Hacking Methodology
11.5	Wireless Hacking Tools
11.6	Bluetooth Hacking
11.7	Wireless Countermeasures
12	Hacking Mobile Platforms
12.1	Mobile Platform Attack Vectors
12.2	Hacking Android OS

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Sl.No	Topic
13	Evading IDS, Firewalls, and Honeypots
13.1	Cryptography Concepts
13.2	Encryption Algorithms
13.3	Cryptography Tools
13.4	Public Key Infrastructure (PKI)
13.5	Email Encryption
13.6	Disk Encryption

PROJECT	
1	Scanning using OWASP ZAP
2	System Hacking
3	Keylogger
4	Scanning for Open ports and Attacking them