

# Ethical Hacking Syllabus

## **Module 1: Introduction 2 Hours - 4 Topics**

- What is Ethical Hacking (Day 1)
- What are the different types of hackers (Day 1)
- Five phases of hacking (Day 1)
- Scope of Ethical Hacking (Day 1)

## **Module 2: Information Gathering 2 Hours - 4 Topics**

- Passive Information Gathering (Day 2)
- Active Information Gathering (Day 2)
- Foot-Printing (Day 2)
- OSINT (Day 2)

## **Module 3: Scanning 2 Hours - 5 Topics**

- Port Scanning (Day 3)
- Network Sweeping (Day 3)
- Vulnerability Scanning (Day 3)
- Service Version Detection (Day 3)
- OS Fingerprinting (Day 3)

## **Module 4: System Hacking 2 Hours - 4 Topics**

- Introduction to Metasploit Framework (Day 4)
- Introduction to Exploits & Payloads (Day 4)
- Type of Connections (Day 4)
- Exploit MS17-010 Vulnerability (Day 4)

## **Module 5: Basic Privilege Escalation 2 Hours - 3 Topics**

- Introduction to Privilege Escalation (Day 5)
- Types of Privilege Escalation (Day 5)
- Bypassuac and getsystem (Day 5)

## **Module 6: System Hacking (Cont) 2 Hours – 2 Topics**

- Android Hacking (Day 6)
- Software based vulnerabilities (Day 6)

## **Module 7: Introduction to Active Directory 2 Hours - 4 Topics**

- Introduction to Active Directory Components *(Day 7)*
- LDAP in Active Directory *(Day 7)*
- Active Directory Functionality *(Day 7)*
- Service Principal Name (SPN) *(Day 7)*

### **Module 8: Introduction to Kerberos 2 Hours - 5 Topics**

- Kerberos Basics and Overview *(Day 8)*
- Components of Kerberos (KDC, Ticket Granting Ticket, etc.) *(Day 8)*
- Kerberos Authentication Process *(Day 8)*
- Kerberos Tickets and Encryption *(Day 8)*
- Introduction to Kerberos Attacks *(Day 8)*

### **Module 9: Malwares 2 Hours - 5 Topics**

- Introduction to Malware *(Day 9)*
- Types of Malwares (Viruses, Worms, Trojans, etc.) *(Day 9)*
- Malware Analysis Techniques *(Day 9)*
- Common Malware Distribution Methods *(Day 9)*
- Malware Detection and Prevention *(Day 9)*

### **Module 10: Network Sniffing & MITM 2 Hours - 4 Topics**

- Introduction to Network Sniffing *(Day 10)*
- Passive vs. Active Sniffing *(Day 10)*
- Common Network Sniffing Tools *(Day 10)*
- Man-in-the-Middle (MITM) Attacks and Techniques *(Day 10)*

### **Module 11: Cryptography & Steganography 2 Hours - 4 Topics**

- Introduction to Cryptography *(Day 11)*
- Symmetric vs. Asymmetric Encryption *(Day 11)*
- Common Cryptographic Algorithms (e.g., AES, RSA) *(Day 11)*
- Steganography Techniques and Applications *(Day 11)*

### **Module 12: Wireless Network Hacking 2 Hours - 4 Topics**

- Introduction to Wireless Networks *(Day 12)*
- Types of Wireless Security Protocols (e.g., WEP, WPA, WPA2) *(Day 12)*
- Wireless Network Scanning and Enumeration *(Day 12)*
- Exploiting Wireless Vulnerabilities *(Day 12)*

### **Module 13: Website Attacks 2 Hours - 4 Topics**

- Introduction to Website Attacks *(Day 13)*
- How Website Attacks Work *(Day 13)*

- Types of Vulnerabilities Exploited (*Day 13*)
- Enumeration Techniques (*Day 13*)

#### **Module 14: Cross-site scripting (XSS) 2 Hours - 4 Topics**

- Introduction to Cross-Site Scripting (XSS) (*Day 14*)
- Understanding How XSS Works (*Day 14*)
- Types of XSS Attacks (Reflected XSS, Stored XSS, DOM-based XSS) (*Day 14*)
- Techniques for Detecting and Exploiting XSS Vulnerabilities (*Day 14*)

#### **Module 15: SQL Injection 2 Hours - 4 Topics**

- Introduction to SQL Injection (SQLi) (*Day 15*)
- Mechanism of SQL Injection (*Day 15*)
- Common Types of SQL Injection Attacks (Union-Based, Blind SQLi, Error-Based) (*Day 15*)
- Techniques for Exploiting SQL Injection Vulnerabilities (*Day 15*)

#### **Module 16: Cross-Site Request Forgery (CSRF) 2 Hours - 4 Topics**

- Introduction to Cross-Site Request Forgery (CSRF) (*Day 16*)
- How CSRF Attacks Work (*Day 16*)
- Examples of CSRF Exploitation (*Day 16*)
- Prevention and Mitigation Strategies (*Day 16*)

#### **Module 17: Website Attacks (cont) 2 Hours - 5 Topics**

- Understanding Cookie Stealing and Session Hijacking (*Day 17*)
- Techniques for Cookie Stealing and Session Hijacking (*Day 17*)
- Data Tampering Attacks on Websites (*Day 17*)
- Phishing Attacks: Methods and Impacts (*Day 17*)
- File Upload Vulnerabilities: Risks and Exploitation (*Day 17*)

#### **Module 18: Introduction to IOT Hacking 2 Hours - 4 Topics**

- Introduction to IoT Security (*Day 18*)
- IoT Device Identification and Enumeration (*Day 18*)
- Exploiting IoT Communication Protocols (*Day 18*)
- Webcam Attacks on IoT Devices (*Day 18*)

#### **Module 19: DDOS attacks & Cloud Hacking 2 Hours - 4 Topics**

- Introduction to DDoS Attacks (*Day 19*)
- Types of DDoS Attacks (*Day 19*)
- DDoS Attack Techniques (*Day 19*)
- Cloud Security Fundamentals (*Day 19*)

**Module 20: IDS/IP 2 Hours - 4 Topics**

- Introduction to IDS/IPS (*Day 20*)
- Types of IDS (Network-based, Host-based) (*Day 20*)
- Types of IPS (Network-based, Host-based) (*Day 20*)
- Honeypots (*Day 20*)