SYLLABUS

OF HACKING

EC-COUNCIL

MADE BY GAUTAM KUMAR SINGH

ETHICAL HACKING SYLLBUS

**Module 1**

**Introduction to Ethical Hacking**

* Information Security Overview
* Information Security Threats and Attack Vectors
* Hacking Concepts
* Ethical Hacking Concepts
* Information Security Controls
* Penetration Testing Concepts
* Information Security Laws and Standards

**Module 2**

**Footprinting and Reconnaissance**

* Footprinting Concepts
* Footprinting through Search Engines
* Footprinting through Web Services
* Footprinting through Social Networking Sites
* Website Footprinting
* Email Footprinting
* Competitive Intelligence
* Whois Footprinting
* DNS Footprinting
* Network Footprinting
* Footprinting through Social Engineering
* Footprinting Tools
* Countermeasures
* Footprinting Pen Testing

**Module 3**

**Scanning Networks**

* Network Scanning Concepts
* Scanning Tools
* Scanning Techniques
* Scanning Beyond IDS and Firewall
* Banner Grabbing
* Draw Network Diagrams
* Scanning Pen Testing

**Module 4**

**Enumeration**

* Enumeration Concepts
* NetBIOS Enumeration
* SNMP Enumeration
* LDAP Enumeration
* NTP Enumeration
* SMTP and DNS Enumeration
* Other Enumeration Techniques
* Enumeration Countermeasures
* Enumeration Pen Testing

**Module 5**

**Vulnerability Analysis**

* Vulnerability Assessment Concepts
* Vulnerability Assessment Solutions
* Vulnerability Scoring Systems
* Vulnerability Assessment Tools
* Vulnerability Assessment Reports

**Module 6**

**System Hacking**

* System Hacking Concepts
* Cracking Passwords
* Escalating Privileges
* Executing Applications
* Hiding Files
* Covering Tracks
* Penetration Testing

**Module 7**

**Malware Threats**

* Malware Concepts
* Trojan Concepts
* Virus and Worm Concepts
* Malware Analysis
* Countermeasures
* Anti-Malware Software
* Malware Penetration Testing

**Module 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
* Sniffing Pen Testing

**Module 9**

**Social Engineering**

* Social Engineering Concepts
* Social Engineering Techniques
* Insider Threats
* Impersonation on Social Networking Sites
* Identity Theft
* Countermeasures
* Social Engineering Pen Testing

**Module 10**

**Denial-of-Service**

* DoS/DDoS Concepts
* DoS/DDoS Attack Techniques
* Botnets
* DDoS Case Study
* DoS/DDoS Attack Tools
* Countermeasures
* DoS/DDoS Protection Tools
* DoS/DDoS Penetration Testing

**Module 11**

**Session Hijacking**

* Session Hijacking Concepts
* Application Level Session Hijacking
* Network Level Session Hijacking
* Session Hijacking Tools
* Countermeasures
* Penetration Testing

**Module 12**

**Evading IDS, Firewalls, and Honeypots**

* IDS, Firewall and Honeypot Concepts
* IDS, Firewall and Honeypot Solutions
* Evading IDS
* Evading Firewalls
* IDS/Firewall Evading Tools
* Detecting Honeypots
* IDS/Firewall Evasion Countermeasures
* Penetration Testing

**Module 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
* Web Server Pen Testing

**Module 14**

**Hacking Web Applications**

* Web App Concepts
* Web App Threats
* Hacking Methodology
* Web App Hacking Tools
* Countermeasures
* Web App Security Testing Tools
* Web App Pen Testing

**Module 15**

**SQL Injection**

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

**Module 16**

**Hacking Wireless Networks**

* Wireless Concepts
* Wireless Encryption
* Wireless Threats
* Wireless Hacking Methodology
* Wireless Hacking Tools
* Bluetooth Hacking
* Countermeasures
* Wireless Security Tools
* Wireless Pen Testing

**Module 17**

**Hacking Mobile Platforms**

* Mobile Platform Attack Vectors
* Hacking Android OS
* Hacking iOS
* Mobile Spyware
* Mobile Device Management
* Mobile Security Guidelines and Tools
* Mobile Pen Testing

**Module 18**

**IoT Hacking**

* IoT Concepts
* IoT Attacks
* IoT Hacking Methodology
* IoT Hacking Tools
* Countermeasures
* IoT Pen Testing

**Module 19**

**Cloud Computing**

* Cloud Computing Concepts
* Cloud Computing Threats
* Cloud Computing Attacks
* Cloud Security

**Module 20**

**Cryptography**

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