

CYBER SECURITY TRAINING SYLLABUS

8 WEEKS

40 DAYS

HANDS-ON LABS

CTF INCLUDED

WEEK

1

Introduction to Cyber Security

- 1 Cyber Security Overview**
Domains, career paths, real-world use cases
- 2 Types of Attacks**
Malware, phishing, ransomware basics
- 3 CIA Triad**
Confidentiality, Integrity, Availability
- 4 Linux Basics**
Commands, file system, permissions
- 5 LAB Lab Setup**
Kali Linux + VirtualBox setup

WEEK

2

Networking Fundamentals

- 6 Networking Basics**
IP, MAC, ports, protocols
- 7 OSI Model**
Layer-wise explanation
- 8 TCP/IP Model**
Packet flow, 3-way handshake
- 9 Protocols**
DNS, HTTP/HTTPS, ARP
- 10 Wireshark**
Packet capture and analysis

WEEK

3

Security Devices & Scanning

- 11 Security Devices**
Firewall, IDS, IPS
- 12 Nmap Basics**
Network scanning
- 13 Enumeration**
Port & service detection
- 14 LAB Nmap Practical**
Hands-on lab
- 15 Revision**
Networking Q&A session

WEEK

4

OS Security & Password Attacks

- 16 OS Security**
Windows vs Linux
- 17 Password Attacks**
Brute force, dictionary attacks
- 18 Hashing vs Encryption**
Concepts & differences
- 19 Cracking Tools**
John the Ripper, Hashcat basics
- 20 Privilege Escalation**
Linux + Windows techniques

WEEK
5

Reconnaissance & Vulnerability Assessment

- 21 **Recon Basics**
Footprinting concepts
- 22 **OSINT**
Whois, Google dorking
- 23 **Recon Types**
Active vs passive reconnaissance
- 24 **Vulnerability Scan**
Nessus basics
- 25 **LAB Practical**
Recon + scan report

WEEK
6

Web Application Security – I

- 26 **Web Basics**
HTTP request/response cycle
- 27 **OWASP Top 10**
Overview of critical risks
- 28 **SQL Injection**
Concepts & types
- 29 **LAB SQLi Practical**
Login bypass lab
- 30 **Burp Suite**
Intercepting & modifying requests

WEEK
7

Web Application Security – II

- 31 **XSS**
Stored, reflected, DOM-based
- 32 **CSRF & IDOR**
Web vulnerability exploitation
- 33 **Exploitation**
Hands-on attack labs
- 34 **MITM Attack**
ARP spoofing techniques
- 35 **DNS Attack**
DNS poisoning basics

WEEK
8

SOC, Incident Response & Assessment

- 36 **SIEM Basics**
SOC workflow & log analysis
- 37 **Incident Response**
Lifecycle & phases
- 38 **LAB Final Project**
Web pentest + report
- 39 **LAB CTF Challenge**
Practical test
- 40 **LAB Wrap-up Session**
Review & program close

