Red Team Essentials: Ethical Hacking in Practice
Duration: 12 Weeks (3 sessions per week, 2 hours each)

🔐 WEEKLY COURSE CURRICULUM

◆ **Week 1: Cybersecurity Foundations**

- What is Cybersecurity? Threat Landscape

- CIA Triad (Confidentiality, Integrity, Availability)

- Risk Assessment Basics & Security Frameworks (NIST, ISO 27001)

- Incident Response & Cybersecurity Career Paths

◆ **Week 2: Networking Basics for Security**

- OSI Model, TCP/IP, IP Addressing, Ports & Protocols

- Network Devices, Debugging Network Issues

- Real-world Use Cases & Best Practices

◆ **Week 3: Operating System Security (Windows & Linux)**

- OS Security Concepts

- User Management, File Permissions

- OS Hardening Techniques & Practical Use Cases

◆ **Week 4: Ethical Hacking & Penetration Testing Intro**

- Hacking Lifecycle, Legal Aspects (IT Act 2000)

- Penetration Testing Phases & PTES Methodology

- Rules of Engagement, Client Communication & Ethics

◆ **Week 5: Vulnerability Assessment & Tools**

- Vulnerability Types, CVSS Scores, Nessus Setup

- Scanning, False Positives, Prioritization

- Patch Management & Reporting

◆ **Week 6: Web Application Security Fundamentals**

- HTTP/HTTPS, Cookies, Sessions

- OWASP Top 10 Overview & Web Architecture

- Proxy Tools (Burp Suite), Authentication & Authorization

◆ **Week 7: SQL Injection Techniques**

- SQL Basics, Types of SQLi (Error-based, Blind, Time-based)

- Using SQLMap, Payload Crafting

- Mitigation & Secure Coding

◆ **Week 8: Cross-Site Scripting (XSS)**

- Reflected, Stored, DOM-based XSS

- Payloads, Filters, Exploitation & Mitigations

- XSS Auditing Tools

◆ **Week 9: Advanced Web Attacks**

- CSRF, SSRF, LFI/RFI

- Insecure Deserialization, File Upload Flaws

- Session Hijacking, Rate Limiting Bypass

◆ **Week 10: API & Mobile App Security**

- API Security Concepts, Postman, Burp Suite

- Android/iOS Architecture, APK/IPA Analysis

- Frida, SSL Pinning Bypass, Data Storage Risks

◆ **Week 11: Cloud Security & Advanced Exploitation**

- Cloud Basics (AWS, Azure), IAM, S3 & EC2 Security

- Exploit Development, Payload Creation

- AV Evasion, Reverse Engineering, Cobalt Strike, Metasploit

◆ **Week 12: Real-Time Project & Report Writing**

- Web Recon, Vulnerability Scanning, Exploits

- Report Structure, Technical Findings, Risk Rating

- Final Project Submission & Client-Style Presentation