SKYPARK ITECH
"The Future of Innovation"

Cyber Security & Ethical Hacking Internship

(15 Days | Practical-Oriented | Industry Ready)

INTERNSHIP SYLLABUS

Internship Objectives

- Understand real-world **cyber threats & defenses**
- Gain hands-on experience with **ethical hacking tools**
- Learn **penetration testing, vulnerability assessment**
- Build confidence to perform **basic security audits & projects**

DAY 1 – Introduction to Cyber Security

- Cyber security fundamentals
- Types of cyber attacks
- CIA Triad (Confidentiality, Integrity, Availability)

Practical:

Identify security risks in real websites

DAY 2 – Networking Basics for Hackers

- OSI & TCP/IP models
- IP addressing, ports, protocols
- Network scanning concepts

Practical:

Network analysis using basic tools

DAY 3 – Linux for Ethical Hackers

- Linux file system

- Essential Linux commands
- Bash basics

Practical:

Linux terminal hands-on tasks

DAY 4 – Cyber Laws & Ethics

- Ethical hacking principles
- Indian IT Act & cyber laws
- Legal vs illegal hacking

Practical:

Case study discussion

DAY 5 – Information Gathering (Reconnaissance)

- Passive vs active reconnaissance
- Whois, DNS, Google hacking

Practical:

Target reconnaissance using tools

DAY 6 – Footprinting & Scanning

- Network scanning
- Port scanning
- Vulnerability scanning

Practical:

Scanning using Nmap

DAY 7 – Enumeration Techniques

- User & service enumeration
- SNMP, FTP, SMB concepts

Practical:

Enumeration using tools

DAY 8 – System Hacking

- Password cracking techniques

- Authentication vulnerabilities

Practical:

Password strength testing (lab-based)

DAY 9 – Malware Concepts

- Types of malware
- Trojans, worms, ransomware
- Malware prevention

Practical:

Malware behavior analysis (demo)

DAY 10 – Web Application Security

- OWASP Top 10
- Common web vulnerabilities

Practical:

SQL Injection & XSS demo (safe lab)

DAY 11 – Wireless Network Security

- Wi-Fi security protocols
- Wireless attacks overview

Practical:

Wireless security testing basics

DAY 12 – Social Engineering Attacks

- Phishing, vishing, baiting
- Human vulnerability analysis

Practical:

Phishing awareness simulation

DAY 13 – Cryptography Basics

- Encryption & decryption
- Hashing algorithms
- Digital signatures

Practical:

Encryption & hashing exercises

DAY 14 – Security Tools & Defense

- IDS / IPS basics
- Firewalls & antivirus systems
- Security best practices

Practical:

Securing a sample system

DAY 15 – Mini Project & Evaluation

- Mini Cyber Security Project
  - Vulnerability assessment report
  - Security recommendations
- Project presentation
- Final assessment & feedback

Mini Project Examples

- Website vulnerability assessment
- Network security audit
- Cyber attack prevention report
- Security awareness project