

# CYBER SECURITY SYLLABUS

## Networking for Security (CORE 🔥)

- OSI & TCP/IP Models
- IP Addressing & Subnetting
- Ports & Protocols (HTTP, HTTPS, FTP, SMTP, DNS)
- Firewalls, Routers & Switches
- VPN, Proxy, NAT
- Network Topologies

## Operating Systems Security

### Linux Security

- Linux File System
- Permissions & Ownership
- User & Group Management
- Shell Scripting Basics

### Windows Security

- Windows Architecture
- Registry
- Services & Processes
- Active Directory Basics

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## Cryptography Basics

- Encryption vs Hashing
- Symmetric & Asymmetric Encryption
- SSL/TLS
- Hashing Algorithms
- Digital Signatures

## Information Gathering (Reconnaissance)

- Passive Recon
- Active Recon
- Footprinting Techniques
- Network Scanning

## Vulnerability Assessment

- Vulnerability Types
- CVE & CVSS
- Vulnerability Scanners
- Manual vs Automated Scanning

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## Web Application Security (🔥 MOST IMPORTANT)

- SQL Injection
- Cross-Site Scripting (XSS)
- CSRF
- Command Injection
- File Inclusion (LFI/RFI)
- Broken Authentication
- Security Misconfigurations
- IDOR



## System Hacking & Penetration Testing

- Password Attacks
- Privilege Escalation
- Maintaining Access
- Covering Tracks
- Post-Exploitation