Cybersecurity Roadmap – Beginner to Expert

This roadmap is tailored for complete beginners who want to become a Cybersecurity Expert. It spans over 6 months and covers essential theory, tools, hands-on practice, and certifications.

📘 Month 1: Core IT & Networking Basics

Week 1–2: Computer Networking

• Topics: IP, DNS, DHCP, TCP/IP, OSI Model, Subnetting, Ports, Protocols
• Tools: Cisco Packet Tracer, Wireshark
• Course: Networking Full Course – freeCodeCamp

Week 3–4: Linux & Windows Basics

• Topics: Linux commands, bash scripting, Windows CLI/PowerShell
• Practice: Install Ubuntu or Kali on VirtualBox
• Try: OverTheWire: Bandit for CLI practice

🔐 Month 2: Introduction to Cybersecurity

Week 5–6: Cybersecurity Fundamentals

• Topics: Threats, Vulnerabilities, Malware, Phishing, IDS/IPS
• Courses: Cisco SkillsForAll, Google Cybersecurity Certificate

Week 7–8: Web Security

• Topics: XSS, SQL Injection, OWASP Top 10
• Labs: TryHackMe – OWASP Top 10 room

🧪 Month 3–4: Hands-On & Tools

Week 9–10: Lab Setup & Vulnerability Scanning

• **Tools**: Kali Linux, Metasploitable2, Burp Suite, Nmap

Week 11–12: Capture the Flag Practice

• **Platforms**: TryHackMe (Beginner Path), Hack The Box (HTB)

⚔️ Month 5–6: Specialization & Certification Prep

Choose one specialization path:
• Ethical Hacking
• SOC Analyst
• Cloud Security
• Digital Forensics

Certifications to target:
• CompTIA Security+
• ISC2 CC
• CEH or OSCP (advanced)

💼 Essential Tools to Learn

- Network Analysis: Nmap, Wireshark
- Web App Pentesting: Burp Suite, OWASP ZAP
- Exploitation: Metasploit, JohnTheRipper
- Practice Platforms: TryHackMe, HackTheBox
- Monitoring: Splunk, ELK Stack

📄 Free Resources

- cyberdefenders.org – Blue team CTFs
- OverTheWire.org – CLI & Linux Wargames
- Red Team Village YouTube – Hacking tutorials
- Hacker101.com – Web security training & CTFs