Cyber Security tools and Technologies

Final Syllabus

Book
Computer Security Fundamentals

Chapter 1: Introduction to Computer Security

- ❖ **Included:** From Section 1 Till Section 6 (Concepts and Approaches)
- ❖ **Excluded:** Section 7 onward

Chapter 2: Networks and the Internet

- ❖ **Included:** Section 1 to 3, and Sections 5 – 7
- ❖ **Excluded:** Section 4

Chapter 5: Malware

- ❖ **Included:** Full Chapter

Chapter 6: Techniques Used by Hackers

- ❖ Introduction
- ❖ Basic Terminology
- ❖ The Reconnaissance Phase
- ❖ Actual Attacks
- ❖ Malware Creation
- ❖ Penetration Testing

Chapter 7: Industrial Espionage in Cyberspace

- ❖ Introduction
- ❖ What is Industrial Espionage?
- ❖ Information as an Asset
- ❖ Real-world Examples Of Industrial Espionage (excluded)
- ❖ How Does Espionage Occur?
- ❖ Protecting Against Industrial Espionage
- ❖ Spear Phishing

Chapter 9: Computer Security Technology

- ❖ Introduction
- ❖ Virus Scanners
- ❖ Firewalls
- ❖ Antispyware
- ❖ IDSs
- ❖ SSL/TLS
- ❖ WiFi Security

Forum: TryHackMe

Nmap Module

1. Nmap Live Host Discovery

2. Nmap Basic Port Scanning

3. Nmap Advanced Port Scanning

   ✓Task 1 to Task 6, and summary

4. Nmap Post Port Scans

   ✓Task 2 and Task 3

Pre security path

✓ Sec 1: Intro to Cyber Security (separate module as well)

    ✓ Intro to Offensive security

    ✓ Intro to Defensive security

    ✓ Careers in Cyber

✓ Sec 2: Network Fundamentals – Complete

✓ Sec 3: How the Web Works – Complete

Vulnerability Research Module

✓ Part 1: **Vulnerabilities 101**

✓ Task 2: Intro to Vulnerabilities

✓ Task 5: An example of finding a Vulnerability

Other Material

Slides / Notes shared on GCR

Week 9: Notes / Slides

Topic 1: Certified Information Systems Security Professional (CISSP):

❖ CISSP: Security Domains for Cyber Analyst

❖ Managing Threats, Risks and Vulnerabilities

❖ Frameworks and Controls [Excluded]

  ▪ Cyber Threat Framework

  ▪ ISO/IEC 27001 Framework

  ▪ Controls

Week 9: Notes / Slides

Topic 2: Software Security

❖ Overview

❖ EU General Data Protection Regulation requirements for software

❖ Classification of vulnerabilities

❖ Detection of vulnerabilities

Week 12: Sniffers

Sniffers: Chapter/Module 9 of Certified Ethical Hacker (CEH) Study Guide v12

- ✓ Notes/ Slides

Week 14: Security Guidelines

- ✓ **NIST Cybersecurity Framework (CSF)**

- ✓ **Securing Against Advanced Cyber Threats**

Notes/ Slides

Research Article [Excluded]

- ❖ **A1: Title:** Methodical Framework for Conducting Reconnaissance and Enumeration in the Ethical Hacking Lifecycle

  - Abstract

  - Sec 1: Introduction

  - Sec 5: Table 1: Reconnaissance Tools (Nmap)