Schedule and outline

Texts

Certified Ethical Hacker Version 9 Cert Guide - Denoted CHE for readings below

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**Week 1**

- Topics:
  - Intro *s1*
  - Ethical Hacking *s2*
  - Information gathering *s3*
- Readings: CEH1-3
- Labs: *p1*

**Week 2**

- Topics:
  - Vagrant & Virtualbox
  - Authentication *s4*
  - MFA
  - BIOMETRICS
  - Rainbow tables
  - Passwords
  - Gaining Access
    - Local password attacks
    - Privilege escalation
  - Physical Security
  - Hacking windows or linux without knowing password.
    - Rescue cd
    - Hirens
    - Reset SAM
  - Bios security
- Readings: CEH4
- Labs:
  - *p2*
  - *p3*

**Week 3**

- Topics:
  - OS Security
  - Maintaining Access
    - Rootkit *s5*
    - Trojan and Backdoor
- Labs:
  - *p4*

**Week 4**

- Topics:
Week 5

Topics:
- Network attacks with SCAPY
- replay
- DOS

Readings:
- Scapy slides 1

Projects:
- p5
- p7

Week 6

Topics:
- More scapy
- Malware
- Ransomware

Readings:
- CEH Chapter 5
- Ransomware
- Linux ransomware

Projects:
- p6
- p9

Week 7

Topics:
- firewalls/acls
- iptables ppt more

Readings:

Projects:
- p10
- p11

Week 8

Topics:
- Malware conclusion
- Social Engineering Toolkit

Readings:
Week 9

- Review
- Test 2
- Topics:
  - Application security
- Readings:
  - Read the section “Finding and Exploiting XSS Vulnerabilities” to the “Summary” at the end of XSS. this book
  - Slides
- Projects:
- Presentations?

Week 10

- Topics:
  - Application security
    - https://sourceforge.net/projects/mutillidae/
- Readings:
  - Not required but good overview of web security here
  - injection slides
- Projects:
  - p12
- Presentations?

Week 11

- Topics:
  - p13
  - ctf
- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
demo
  - Database injections
  - Jails, Containers
- Readings:
  - Buffer overflows
  - Overflows slides
- Presentations?
• Topics:
  ◦ honeypots
  ◦ honeynets
  ◦ wireless and mobile security
• Projects:
  ◦ p14
• Readings:
  ◦ CEH Chapter 8
  ◦ CEH Chapter 9

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**Week 13**

• Topics:
  ◦ Cryptography
  ◦ CTF work
  ◦ Forensics
• Projects:
  ◦ p15
• Readings:
  ◦ encryption
  ◦ CEH Chapter 12

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**Week 14**

• Topics:
  ◦ CTF presentations

Thanksgiving

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**Week 15**

• Topics:
  ◦ More CTF
  ◦ Fun random stuff?
  ◦ https://jhalon.github.io/over-the-wire-leviathan/
  ◦ https://www.hackthis.co.uk/levels/main/4
• Test 3