Schedule and outline

Texts

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

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:
• More OS Security
• Armitage
• zero day exploits
• security updates and patches
• Data Hiding: s6
• Review here
• Man in the middle project p5

• Test 1
• Presentation

---

**Week 5**

• Topics:
  • Network attacks with SCAPY
  • replay
  • DOS
• Readings:
  • Scapy slides 1
• Projects:
  • p6
  • p7

---

**Week 6**

• Topics:
  • More scapy
  • Malware
  • Ransomware
• Readings:
  • CEH Chapter 5
  • Ransomware
  • Linux ransomware
• Projects:
  • p8
  • 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](http://code.google.com/edu/security/index.html)
  - Slides
- Projects:
- Presentations?

Week 10

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

Week 11

- Topics:
- Projects:
  - p13
  - ctf
- Topics:
  - Application Security
    - Software Security
    - Buffer overflows
    - [demo](https://sourceforge.net/projects/mutillidae/)
    - Database injections
    - Jails, Containers
- Readings:
  - Buffer overflows
  - Overflows [slides](https://sourceforge.net/projects/mutillidae/)
- Presentations?

Week 12
• Topics:
  ◦ honeypots
  ◦ honeynets
  ◦ wireless and mobile security
• Projects:
  ◦ p14
• Readings:
  ◦ CEH Chapter 8
  ◦ CEH Chapter 9

---

**Week 13**

• Topics:
  ◦ Cryptography
  ◦ CTF work
  ◦ Forensics
• Projects:
  ◦ p15
• Readings:
  ◦ [encryption](https://jhalon.github.io/over-the-wire-leviathan/)
  ◦ CEH Chapter 12

---

**Week 14**

• Topics:
  ◦ CTF presentations

Thanksgiving

---

**Week 15**

• Topics:
  ◦ More CTF
  ◦ Fun random stuff?
  ◦ [https://www.hackthis.co.uk/levels/main/4](https://www.hackthis.co.uk/levels/main/4)
• Test 3