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

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**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
  - Biosec privacy
- **Readings:** CEH4
- **Labs:**
  - p2
  - p3

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**Week 3**

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

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**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:
- 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/](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?

Week 12
- 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://www.hackthis.co.uk/levels/main/4](https://www.hackthis.co.uk/levels/main/4)
- Test 3