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:
  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](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/)
- Projects:
  - p12
- Presentations?

Week 11

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

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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