Schedule and outline

Texts

- Certified Ethical Hacker (CEH) Version 10 Cert Guide, 3rd Edition (Available at safarionline) - 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
C&C server
Armitage
Data Hiding: s6
Review here

Labs:
  * p4a

Test 1
  * Presentation

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Week 5

Topics:
  * MITM
  * Ssh downgrade example
  * Network attacks with SCAPY
  * replay
  * DOS

Readings:
  * Scapy slides 1

Projects:
  * p5 (man in the middle)
  * p6
  * p7

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Week 6

Topics:
  * More scapy
  * Malware
  * Ransomware

Readings:
  * CEH Chapter 5
  * Ransomware
  * Linux ransomware

Projects:
  * p8
  * p9

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Week 7

Topics:
  * firewalls/acls
  * iptables ppt more

Readings:

Projects:
  * p10
  * p11

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Week 8

Topics:
  * Malware conclusion
  * Social Engineering Toolkit

Readings:
  * CEH Chapter 10
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:
- Projects:
  - p13
  - ctf
- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
  - demo
  - Database injections
  - Jails, Containers
- Readings:
  - Buffer overflows
  - Overflows slides
- Presentations?

Sometime in here we will have a 3 hour evening workshop!
**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](https://jhalon.github.io/over-the-wire-leviathan/)
  - CEH Chapter 12

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**Week 14**

- Topics:
  - CTF presentations

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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