Schedule and outline

Texts

- Certified Ethical Hacker (CEH) Version 10 Cert Guide, 3rd Edition (Available at safarionline) - 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
  - Bios security
- 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

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**Week 5**

- Topics:
  - Network attacks with SCAPY
  - replay
  - DOS
- Readings:
  - [Scapy slides 1](#)
- Projects:
  - [p6](#)
  - [p7](#)

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**Week 6**

- Topics:
  - More scapy
  - Malware
  - Ransomware
- Readings:
  - CEH Chapter 5
  - [Ransomware](#)
  - [Linux ransomware](#)
- Projects:
  - [p6](#)
  - [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:
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:
- 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

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

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**