**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
  - 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

**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](#)
- 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:
  - 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
- Test 3