**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
• C&C server
• 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:
  • **p6** (man in the middle)
  • **p6**
  • **p7**

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### Week 6

• Topics:
  • More scapy
  • Malware
  • Ransomware
• Readings:
  • CEH Chapter 5
  • Malware **s7**
  • [Ransomware](#)
  • [Linux ransomware](#)
• Projects:
  • **p8**
  • **p9**

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### Week 7

• Topics:
  • IDS
• Readings:
• Projects:
  • **p10**

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### Week 8

• Topics:
  • IDS, Firewalls, and Honeypots
• Readings:
  • CEH Chapter 9 - IDS, Firewalls, and Honeypots
  • **s8**
  • iptables [ppt more](#)
• Projects:
**Week 9**

- Test 2 (Take in testing center)
- Topics:
  - Web hacking
  - Application security
- Readings:
  - Chapter 7
  - Slides
- Projects:
  - p12
- Presentations?

**Week 10**

Malware workshop (Mar 9, 7-10pm)

- Topics:
  - Application security
  - [https://sourceforge.net/projects/mutillidae/](https://sourceforge.net/projects/mutillidae/)
- Readings:
  - Slides
  - Not required but good overview of web security [here](#)
    - injection slides
- Projects:
  - p13
- Presentations?

**Spring Break**

**Week 11 (Mar 23-27)**

- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
- Readings:
  - Buffer overflows
  - Overflows slides
- Video Lectures:
  - Sql Injections
  - More SQL Injections
  - Buffer overflow slides
- Presentations
  - See the presentation schedule [here](#)
- Projects:
  - p14
  - buffer overflow
Week 12 (Mar 30 - Apr 3)

- Topics:
  - wireless and mobile security

- Projects:
  - ctf

- Readings:
  - CEH Chapter 8

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Week 13 (Apr 6-10)

- Topics:
  - Cryptography
  - CTF work
  - Forensics

- Readings:
  - encryption
  - CEH Chapter 10

- Video Lectures:
  - [Encryption 1](#)
  - [Encryption 2](#)

- Projects:
  - p15

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Week 14 (Apr 13-15)

- Topics:
  - Fun random stuff?
  - [https://www.hackthis.co.uk/levels/main/4](https://www.hackthis.co.uk/levels/main/4)

- Projects:
  - p16
  - Maybe one last project

- Test 3