**Schedule and outline**

**Texts**


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**Week 1 (week of Jan 11)**

- **Topics:**
  - Intro s1
  - Ethical Hacking s2
  - Information gathering s3
- **Readings:** CEH1-3
- **Labs:** p1

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**Week 2 (week of Jan 18)**

- **Topics:**
  - Virtualbox review
  - 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 (Week of Jan 25)**

- **Topics:**
  - OS Security
  - Maintaining Access
    - Rootkit s5
  - Trojan and Backdoor
- **Readings:** Rootkits
- **Reptile rootkit setup**
- **Reptile rootkit Demo**
- **Labs:**
  - p4

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**Week 4 (Week of Feb 1)**

- **Topics:**
More OS Security
* C&C server
* PowerShell empire
* Data Hiding: s6
* Review [here](#)

Labs:
* p4a

Test 1
* Presentation

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### Week 5 (Week of Feb 8)

- **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 (Week of Feb 15)

- **Topics:**
  - More scapy
  - Malware
  - Ransomware
- **Readings:**
  - CEH Chapter 5
  - Malware s7
  - Ransomware
  - Linux ransomware
- **Projects:**
  - p8
  - p9

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### Week 7 (Week of Feb 22)

- **Topics:**
  - IDS
- **Readings:**
- **Projects:**
  - p10

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### Week 8 (Week of Mar 1)

- **Topics:**
  - IDS, Firewalls, and Honeypots
- **Readings:**
  - CEH Chapter 9 - IDS, Firewalls, and Honeypots
  - s8
  - iptables [ppt, more](#)
Projects:
  - p11

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Spring Break (Week of Mar 8)

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Week 9 (Week of Mar 15)

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

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Week 10 (Week of Mar 22)

Malware workshop (????)

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

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Week 11 (Week of Mar 29)

- 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](here)
- Projects:
  - p14
  - buffer overflow

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Week 12 (Week of Apr 5)

- Topics:
  - wireless and mobile security
- Projects:
  - ctf
- Readings:
  - CEH Chapter 8

Week 13 (Week of Apr 12)

- Topics:
  - Cryptography
  - CTF work
  - Forensics
- Readings:
  - encryption
  - CEH Chapter 10
- Video Lectures:
  - Encryption 1
  - Encryption 2
- Projects:
  - p15

Week 14 (Week of Apr 19)

- 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

Final?