**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:
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*

Week 6

- Topics:
  - More scapy
  - Malware
  - Ransomware

- Readings:
  - CEH Chapter 5
  - Malware *s7*
  - *Ransomware*
  - *Linux ransomware*

- Projects:
  - *p8*
  - *p9*

Week 7

- Topics:
  - IDS

- Readings:

- Projects:
  - *p10*

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?

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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?

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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](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
- Readings:
  - CEH Chapter 8

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Week 13 (Apr 6-10)

- Topics:
  - Cryptography
  - CTF work
  - Forensics
- Readings:
  - [encryption](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
  - CEH Chapter 10
- Video Lectures:
  - [Encryption 1](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
  - [Encryption 2](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
- Projects:
  - [p15](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)

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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](https://jhalon.github.io/over-the-wire-leviathan/)
    - Maybe one last project
- Test 3