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 \texttt{s1}
  - Ethical Hacking \texttt{s2}
  - Information gathering \texttt{s3}
- Readings: CEH1-3
- Labs: \texttt{p1}

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**Week 2**

- Topics:
  - Vagrant & Virtualbox
  - Authentication \texttt{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:
  - \texttt{p2}
  - \texttt{p3}

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**Week 3**

- Topics:
  - OS Security
  - Maintaining Access
    - Rootkit \texttt{s5}
    - Trojan and Backdoor
- Labs:
  - \texttt{p4}

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**Week 4**

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

* Labs:
  * [p4a](#)
* Test 1
* Presentation

### 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?

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