Schedule and outline

Texts

- Certified Ethical Hacker (CEH) Version 10 Cert Guide, 3rd Edition (available online through o’reilly books thru library.dixie.edu)

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Week 1 (week of Jan 11)

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

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Week 2 (week of Jan 18)

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

- Topics:
  - OS Security
  - Maintaining Access
    - Rootkit \texttt{s5}
    - Trojan and Backdoor
- Readings: Rootkits
  - \texttt{Reptile rootkit setup}
  - \texttt{Reptile rootkit Demo}
- Labs:
  - \texttt{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*
  - MITM with dns spoof
  - 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
Projects:
  - p11
  - Test 2 (???)

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**Spring Break (Week of Mar 8)**

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**Week 9 (Week of Mar 15)**

- 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](http://code.google.com/edu/security/index.html)
    - 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](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
- 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

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**Week 13 (Week of Apr 12)**

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

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**Week 14 (Week of Apr 19)**

- Topics:
  - Fun random stuff?
  - https://www.hackthis.co.uk/levels/main/4
- Projects:
  - p16
  - Maybe one last project
- Test 3

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Final?