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 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
    - 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  
  - Proxy servers  
- **Readings:**  
  - Chapter 7  
  - Slides  
  - Proxy Slides  
- **Projects:**  
  - p12  
  - p13
- **Presentations?**

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### Week 10 (Week of Mar 22)

- **Topics:**  
  - Application security  
  - [https://sourceforge.net/projects/mutillidae/](https://sourceforge.net/projects/mutillidae/)  
  - Burpsuite  
  - Overview of burpsuite.  
  - SQL Injection  
- **Video Lectures:**  
  - Sql Injections  
  - More SQL Injections
- **Readings:**  
  - Not required but good overview of web security [here](https://sourceforge.net/projects/mutillidae/)  
  - Injection Slides
- **Projects:**  
  - p14
- **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:**  
  - Buffer overflow slides
- **Presentations**  
  - See the presentation schedule [here](https://sourceforge.net/projects/mutillidae/)
- **Projects:**  
  - CTF1  
  - buffer overflow

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### Week 12 (Week of Apr 5)
Week 13 (Week of Apr 12)

*Malware workshop April 13?*

- **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?