Schedule and outline

Texts

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

Week 1 (week of Jan 11)

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

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

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

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
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.
  - SqlInjection
- 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
- Projects:
  - p16
  - Maybe one last project
- Test 3