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 (???)

Spring Break (Week of Mar 8)

Week 9 (Week of Mar 15)

- Topics:
  - Web hacking
  - Application security
  - Proxy servers
- Readings:
  - Chapter 7
  - Slides
  - Proxy Slides
- Projects:
  - p12
  - p13
- Presentations?

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](#)
  - Injection Slides
- Projects:
  - p14
- Presentations?

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](#)
- Projects:
  - CTF1
  - buffer overflow

Week 12 (Week of Apr 5)
• Topics:
  • wireless and mobile security
  • https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref
• Projects:
  • ctf2
• Readings:
  • CEH Chapter 8

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**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

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

• Topics:
  • Fun random stuff?
  • https://jhalon.github.io/over-the-wire-leviathan/
  • https://www.hackthis.co.uk/levels/main/4
• Projects:
  • p16
  • Maybe one last project
• Test 3

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Final?