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  
  - Ethical Hacking
  - Information gathering
- Readings: CEH1-3
- Labs: p1

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**Week 2 (week of Jan 18)**

- Topics:
  - Virtualbox review
  - Authentication
  - 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
  - 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

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

Week 6 (Week of Feb 15)

Topics:
- More scapy
- Malware
- Ransomware
Readings:
- CEH Chapter 5
- Malware s7
- Ransomware
- Linux ransomware
Projects:
- p8
- p9

Week 7(Week of Feb 22)

Topics:
- IDS
Readings:
Projects:
- p10

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.
  • SqlInjection
• Video Lectures:
  • Sql Injections
  • More SQL Injections
• Readings:
  • Not required but good overview of web security [here](#)
  • 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](#)
• 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

Final?