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:
  - Syllabus
  - 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

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
Projects:
- **p8**
- **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
- Projects:
  - ctf2
- Readings:
  - CEH Chapter 8

Week 13 (Week of Apr 12)

*Malware workshop April 13?*

- Topics:
  - Cryptography
  - CTF work
  - Forensics
- Readings:
  - [encryption](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
  - 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?