Schedule and outline

Texts

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

Week 1 (week of Jan 10)

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

Week 2 (week of Jan 17)

- 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 24)

- Topics:
  - OS Security
  - Maintaining Access
    - Rootkit s5
    - Trojan and Backdoor
- Readings: Rootkits
- Reptile rootkit setup
- Reptile rootkit Demo
- Labs:
  - p4

Week 4 (Week of Jan 31)
Week 5 (Week of Feb 7)

- Topics:
  - MITM
  - Ssh downgrade example
  - MITM with dns_spoof
  - Network attacks with SCAPY
  - replay
  - DOS
- Readings:
  - Man in the middle
  - Scapy slides 1
- Projects:
  - p5 (man in the middle)
  - p6
  - p7

Week 6 (Week of Feb 14)

- Topics:
  - More scapy
  - Malware?
  - Ransomware
- Readings:
  - CEH Chapter 5
  - FIN vs RST packets
  - Social Engineering
  - Ransomware
- Projects:
  - p8
  - p9

Week 7 (Week of Feb 21)

No school Monday

- Topics:
  - IDS
- Readings:
- Projects:
  - p10

Week 8 (Week of Feb 28)

- Topics:
  - IDS, Firewalls, and Honeypots
- Readings:
  - CEH Chapter 9 - IDS, Firewalls, and Honeypots
Week 9 (Week of Mar 7)

- **Projects:**
  - p11
  - Cloud based IDS
- **Test 2 (???)**

Topics:
- Web hacking
- Application security
- Proxy servers

Readings:
- Chapter 7
- Slides
- Proxy Slides

Projects:
- p12
- p13

Presentations?

Spring Break (Week of Mar 14)

Week 10 (Week of Mar 21)

- **Topics:**
  - Application security
  - [https://owasp.org/www-project-mutillidae-ii/](https://owasp.org/www-project-mutillidae-ii/)
  - Burpsuite
  - SqlInjection
- **Video Lectures:**
  - Sql Injections
  - More SQL Injections
- **Readings:**
  - Injection Slides
- **Projects:**
  - p14
- Presentations?

Week 11 (Week of Mar 28)

- **Topics:**
  - Application Security
  - Software Security
    - Buffer overflows
- **Readings:**
  - Buffer overflows
  - Overflows slides
- **Video Lectures:**
  - Buffer overflow slides
- **Projects:**
  - CTF1
  - buffer overflow

Week 12 (Week of Apr 4)

- **Topics:**
• Cryptography
• CTF work
• Forensics
• Readings:
  • encryption
  • CEH Chapter 10
• Video Lectures:
  • Encryption 1
  • Encryption 2
• Projects:
  • ctf2

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**Week 13 (Week of Apr 11)**

*Malware workshop April 12*

• Topics:
  • wireless and mobile security
  • bluetooth - no audio
  • wireless
• Projects:
  • p15
• Readings:
  • CEH Chapter 8

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**Week 14 (Week of Apr 18)**

• 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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**Week 15 (Week of Apr 25)**

Final?