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)
• Topics:
  • More OS Security
  • C&C server
  • Powershell empire
  • Data Hiding: \texttt{s6}
  • Review \url{here}
• Labs:
  • \texttt{p4a}
• Test 1
• \texttt{Presentation}

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**Week 5 (Week of Feb 7)**

• Topics:
  • MITM
  • \texttt{Ssh downgrade example}
  • \texttt{MITM with dns spoof}
  • Network attacks with SCAPY
  • replay
  • DOS
• Readings:
  • \texttt{Scapy slides 1}
• Projects:
  • \texttt{p5} (man in the middle)
  • \texttt{p6}
  • \texttt{p7}

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**Week 6 (Week of Feb 14)**

• Topics:
  • More scapy
  • Malware
  • Ransomware
• Readings:
  • CEH Chapter 5
  • Malware \texttt{s7}
  • Ransomware
  • \texttt{Linux ransomware}
• Projects:
  • \texttt{p8}
  • \texttt{p9}

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**Week 7 (Week of Feb 21)**

• Topics:
  • IDS
• Readings:
• Projects:
  • \texttt{p10}

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**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)

- 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://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 28)

- 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 4)

- **Topics:**
  - wireless and mobile security
- **Projects:**
  - [ctf2](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
- **Readings:**
  - CEH Chapter 8

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Week 13 (Week of Apr 11)

*Malware workshop April ?*

- **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](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
  - [Encryption 2](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)
- **Projects:**
  - [p15](https://resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)

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Week 14 (Week of Apr 18)

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

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Week 15 (Week of Apr 25)

**Final?**