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: s6
- Review here

Labs:
- p4a
- Test 1
- Presentation

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**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

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

Topics:
- More scapy
- Malware?
- Ransomware

Readings:
- CEH Chapter 5
- `FIN vs RST packets`
- Social Engineering s7
- Ransomware

Projects:
- p8
- p9

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

No school Monday

Topics:
- IDS

Readings:
- Projects:
- 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://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://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?