Schedule and outline

Texts

- Certified Ethical Hacker (CEH) Version 10 Cert Guide, 3rd Edition (Available at safarionline) - Denoted CHE for readings below

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Week 1

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

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Week 2

- Topics:
  ◦ Vagrant & Virtualbox
  ◦ 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

- Topics:
  ◦ OS Security
  ◦ Maintaining Access
    ▪ Rootkit s5
    ▪ Trojan and Backdoor
- Labs:
  ◦ p4

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Week 4

- Topics:
More OS Security
• C&C server
• Data Hiding: s6
• Review here

Labs:
• p4a
• Test 1
• Presentation

Week 5

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

Week 6

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

Week 7

• Topics:
  • IDS
• Readings:
• Projects:
  • p10

Week 8

• Topics:
  • IDS, Firewalls, and Honeypots
• Readings:
  • CEH Chapter 9 - IDS, Firewalls, and Honeypots
  • s8
  • iptables ppt more
• Projects:
Week 9

- Test 2 (Take in testing center)
- Topics:
  - Web hacking
  - Application security
- Readings:
  - Chapter 7
  - Slides
- Projects:
  - p12
- Presentations?

Week 10

Malware workshop (mar 9, 7-10pm)

- Topics:
  - Application security
  - [https://sourceforge.net/projects/mutillidae/](https://sourceforge.net/projects/mutillidae/)
- Readings:
  - Slides
  - Not required but good overview of web security [here](http://example.com)
  - injection slides
- Projects:
  - p13
- Presentations?

SPring Break

Week 11 (Mar 23-27)

- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
- Readings:
  - Buffer overflows
  - Overflows slides
- Video Lectures:
  - Sql Injections
  - More SQL Injections
  - Buffer overflow slides
- Presentations
  - See the presentation schedule [here](http://example.com)
- Projects:
  - p14
  - buffer overflow
Week 12 (Mar 30 - Apr 3)

- Topics:
  - wireless and mobile security
- Projects:
  - ctf
- Readings:
  - CEH Chapter 8

Week 13 (Apr 6-10)

- Topics:
  - Cryptography
  - CTF work
  - Forensics
- Readings:
  - encryption
  - CEH Chapter 10
- Video Lectures:
  - Encryption 1
  - Encryption 2
- Projects:
  - p15

Week 14 (Apr 13-15)

- Topics:
  - Fun random stuff?
  - https://www.hackthis.co.uk/levels/main/4
- Projects:
  - p16
  - Maybe one last project
- Test 3