Schedule and outline

Texts

Certified Ethical Hacker Version 9 Cert Guide - 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
• Armitage
• zero day exploits
• security updates and patches
• Data Hiding: s6
• Review here
• Man in the middle project p5

• Test 1
• Presentation

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**Week 5**

• Topics:
  • Network attacks with SCAPY
  • replay
  • DOS
• Readings:
  • Scapy slides 1
• Projects:
  • p6
  • p7

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**Week 6**

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

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**Week 7**

• Topics:
  • firewalls/acls
  • iptables ppt more
• Readings:
• Projects:
  • p10
  • p11

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**Week 8**

• Topics:
  • Malware conclusion
  • Social Engineering Toolkit
• Readings:
Week 9

- Review
- Test 2
- Topics:
  - Application security
- Readings:
  - Read the section “Finding and Exploiting XSS Vulnerabilities” to the “Summary” at the end of XSS.
    - this book
    - Slides
- Projects:
- Presentations?

Week 10

- Topics:
  - Application security
    - https://sourceforge.net/projects/mutillidae/
- Readings:
  - Not required but good overview of web security here
  - injection slides
- Projects:
  - p12
- Presentations?

Week 11

- Topics:
- Projects:
  - p13
  - ctf
- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
    - demo
  - Database injections
  - Jails, Containers
- Readings:
  - Buffer overflows
  - Overflows slides
- Presentations?

Week 12
- Topics:
  - honeypots
  - honeynets
  - wireless and mobile security
- Projects:
  - p14
- Readings:
  - CEH Chapter 8
  - CEH Chapter 9

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**Week 14 - 15**

- Topics:
  - Cloud security
  - Cryptography
  - p15
  - Fun random stuff?
  - https://www.hackthis.co.uk/levels/main/4
  - CTF presentations
- Readings:
- Test 4