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| **ELEMENT** | **CONTENT** |
| DEPARTMENT | CIS |
| AUTHOR (S) | Jack Skoda |
| COURSE NUMBER | **CIS 4XXX** |
| COURSE TITLE | **Advanced Ethical Hacking** |
| SHORT TITLE | Adv Ethical Hack |
| COURSE LEVEL | 4000 |
| DATE CREATED | 12/13/2016 |
| CHECKED/CHANGED | 6/6/2017 |
| PREREQUISITES | CIS 4240 |
| COREQUISITES |  |
| RESTRICTIONS |  |
| SPECIAL FEES | No |
| CREDITS | 3 |
| HOURS | 3 hours of lecture per week |
| SEMESTER | As required |
| COURSE DESCRIPTION | This class is an exploration of advanced cybertechnology threats and tactics and covers the employment of advanced tactics in the context of a penetration test. Other topics covered include planning, web threats, mobile threats, wireless hacking, protocol abuse, malware creation, social engineering, and evasion of defensive tools |
| SUGGESTED TEXTS | *Hacking: The Next Generation*; Dhanjani, Rios, & Hardin |
| OPTIONAL TEXTS |  |
| COURSE OUTCOMES | The successful student will be able to:   1. Use advanced techniques to conduct penetration tests 2. Analyze computer evidence to identify advanced threats 3. Plan and implement defensive measures to counter advanced threats |
| COURSE CONTENT | 1. Introduction    1. Ethical considerations    2. Legal considerations    3. Planning 2. Web-based threats    1. Cross-site scripting/forgery    2. Iframe abuse    3. Advertising transmission of malware    4. sslstrip techniques 3. Attack tactics    1. Cache poisoning attacks    2. Firewall penetration    3. Pivoting    4. Off-line transmission strategies 4. Malware    1. Building from a proof of concept .c file    2. Creation with MSFVenom    3. Analysis with edb/strings 5. Social Engineering    1. Social Engineering Toolkit    2. Targeting considerations    3. Employment tactics 6. IDS evasion    1. Protocol abuse    2. Fragmentation tricks    3. Tunneling 7. Wireless    1. Scanning    2. Key cracking with Kismet    3. Unwelcome intermediary (a.k.a. “man in the middle”) 8. Mobile attacks    1. Rooting    2. Malware transmission    3. Adware transmission |
| LAB/STUDIO OUTCOMES |  |
| LAB/STUDIO CONTENT |  |
| LECTURE CAPACITY | 32 |
| LAB CAPACITY |  |
| GRADED OR P/NP | Graded |
| EVALUATION | Quizzes, homework, projects, exams |
| DELIVERY METHOD | Hybrid Lecture |
| ROOM REQUIREMENTS |  |
| AUTHOR’S NOTES | Adobe Connect |