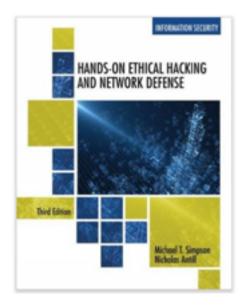# CNIT 123
Ethical Hacking and
Network Defense

Spring 2017 Sam Bowne

36684 Sat 9:10 - 12:00 SCIE 37

Catalog Description

ADVISE: CNIT 106 or 120 or 201C

Learn how hackers attack computers and networks, and how to protect Windows and Linux systems. Legal restrictions and ethical guidelines will be taught and enforced. Students will perform many hands-on labs, both attacking and defending, using port scans, footprinting, buffer overflow exploits, SQL injection, privilege escalation, Trojans, and backdoors. CSU

Learn about attacks and how to defend Windows and Linux systems. After successful completion of this course, students will be able to:

> **Outcome 1: Determine what an ethical hacker can and cannot do legally, and evaluate credentials and roles of penetration testers.**
> **Outcome 2: Perform reconnaissance on a target network using a variety of scanning and probing techniques.**
> **Outcome 3: Enumerate and classify Microsoft and Linux Operating Systems vulnerabilities.**
> **Outcome 4: Take control of Web Servers and wireless networks, and protect them.**
> **Outcome 5: Evaluate and select cryptography and hashing methods, and perform attacks against them.**
> **Outcome 6: Select and implement security devices, including routers, firewalls, Intrusion Detection Systems, and honeypots.**

Textbook

Hands-On Ethical Hacking and Network Defense, Third Edition by Michael T. Simpson, Kent Backman, and James Corley -- ISBN: 9781285454610

Quizzes

The quizzes are multiple-choice, online, and open-book. However, you may not ask other people to help you during the quizzes. You will need to study the textbook chapter before the lecture covering it, and take the quiz before that class. Each quiz is available for one week, up till 8:30 am Saturday. Each quiz has 5 questions, you have ten minutes to take it, and you can make two attempts. If you take the quiz twice, the second score is the one that counts, not necessarily the higher score.

To take quizzes, log in to CCSF's online class site here:

https://ccsf.instructure.com

Schedule

Date	Quiz	Topic
Sat 1-21		Ch 1: Ethical Hacking Overview
Sat 1-28		Ch 2: TCP/IP Concepts Review
Fri 2-3	*Last Day to Add Classes*	
Sat 2-4	Ch 2 Quiz due before class Ch 3 Quiz due before class Proj 1 & 2 due	Ch 3: Network and Computer Attacks
Sat 2-11	*Holiday - No Class*	
Sat 2-18	Ch 4 Quiz due before class Proj 3 & 4 due	Ch 4: Footprinting and Social Engineering
Sat 2-25	Ch 5 Quiz due before class Proj 5 & 6 due	Ch 5: Port Scanning
Sat 3-4	Ch 6 Quiz due before class Proj 7 & 8 due	Ch 6: Enumeration
Sat 3-11	Ch 7 Quiz due before class Proj 9 & 10 due	Ch 7: Programming for Security Professionals
Sat 3-18	Ch 8 Quiz due before class Proj 11 & 12 due	Ch 8: Desktop and Server OS Vulnerabilities
Sat 3-25	*Holiday - No Class*	
Sat 4-1	Ch 9 Quiz due before class Proj 13 & 14 due	Ch 9: Embedded Operating Systems: The Hidden Threat
Sat 4-8	Ch 10 Quiz due before class Proj 15 & 16 due	Ch 10: Hacking Web Servers
Sat 4-15	No Quiz	Guest Speaker TBA
Sat 4-22	Ch 11 Quiz due before class Proj 17 & 18 due	Ch 11: Hacking Wireless Networks
Sat 4-29	Ch 12 Quiz due before class Proj 19 & 20 due	Ch 12: Cryptography
Sat 5-6	Ch 13 Quiz due before class Proj 21 & 22 due	Ch 13: Network Protection Systems
Sat 5-13	No Quiz	Last Class: all extra credit projects due
Sat 5-20	*Final Exam*	