CSC 348/648 A
Computer Security

T Th 2:00 - 3:15am Spring 2013

Instructor

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Course

Text:
Introduction to Computer Security, Bishop

Articles:
In addition to the required text book, students will be required to read selected articles concerning network security. Materials will be available on the web or in the library. Students will be responsible for obtaining all assigned readings.

Grading:

3 Tests	35%
Homework and reviews	15%
Programs and labs	20%
Final exam	30%

Prerequisites: CSC 241, C/C++ programming, scripting languages, Unix.

Attendance: Regular attendance of class is expected.

Tests, Quizzes, and the Final Exam: The tests will be administered during class. The tests will cover the material from the assigned readings, lectures, and lab. The tests and exam will be closed book. A make-up test will be administered only for **University excused absences**.

Homework: Homework will always be due before class the following lecture. **No** late homework will be accepted.

Programs and Labs: Lab work and exercises will be done in lab 22 (OS/network laboratory). **Labs will be scheduled during lecture** and make-up labs are **not** possible. Students must bring their text, lab assignment, and any assigned pre-lab to lab.

CSC 348/648 Difference: The undergraduate (CSC 348) and graduate (CSC 648) courses will have different tests, homeworks, reading assignments, and projects.

Academic Integrity: All tests, programs, and homework must be done independently by each student. Copying of partial or complete work will not be tolerated and will be referred to the University Judicial System. Do not throw away or recycle any notes until the end of the semester. Should a question of authorship arise you will be expected to produce hand-written and printed documents that trace the development of your work.

As a result of this class, you will gain knowledge that will allow you to mount **unethical** attacks against computers. This is **not** the purpose of this class. In particular, always ask and obtain written permission from the system administrators (CS and WFU campus) before experimenting with security vulnerabilities and vulnerability detection tools. Such activities, without first obtaining explicit written permission from the appropriate administration, are strictly **forbidden**. In-class discussions of methods for exploiting security vulnerabilities does **not** constitute permission to use them. Any violation with this and/or any other Wake Forest computer usage policy will be referred to the University Judicial System. See groups.wfu.edu/CIT/ethical_use_policy.html for details about computing resource usage.

Disabilities and special accommodations: If you have a disability that may require an accommodation for taking this course, then please contact the Learning Assistance Center (758-5929) within the first two weeks of the semester.

Lecture Schedule

The following is the tentative lecture schedule for this course. Dates and topics may change during the semester!

Date	Lecture	Text
1/17	Introduction	1
1/22	Overview of computer security	1
1/24	Cryptography	8
1/29	Cryptography and key management	8, 9
1/31	Cipher techniques	10
2/5	Access control matrices	2, 14
2/7	Security policies	4
2/12	Confidentiality models	5
2/14	**Test 1**	
2/19	Integrity models (**last day to drop course 2/20**)	6, 13
2/21	Hybrid policies	7
2/26	Authentication and identification	11
2/28	Buffer overflows	
3/5	Program security	26
3/7	Malware	19
3/19	Malware solutions	19
3/21	**Test 2**	
3/26	Network review	
3/28	Network attacks	
4/2	Network attacks	
4/4	Vulnerability analysis	20
4/9	Firewalls and policy management	23
4/11	Auditing and intrusion detection systems	23
4/16	Intrusion detection systems	24
4/18	**Test 3**	
4/23	System security	18
4/25	Confinement	16
4/30	New threats	
5/7	Final exam 9:00am	