

ENTS 689I – Network Immunity

Fall 2008

General Information

Class Time: Thu 5:30pm-8:15pm
Location: Plant Science Building (PLS), Room 1119

Instructors:
Part I: Charles Clancy (tcc@umd.edu)
Parts II/III: Nick Petroni (npetroni@cs.umd.edu)
and
AAron Walters (awalters@4tphi.net)

Office Hours: Immediately following class, or by appointment.
Course Website: <http://www.cs.umd.edu/~clancy/ents689i/>
Course Listserv: ents689i-0101-fall08@coursemail.umd.edu
Textbook: Pfleeger, *Security in Computing*, 3rd or 4th Edition (December 2002)

Lectures and Schedule

September 4	Introduction
September 11	Part I: Cryptography, Shared Key
September 18	Part I: Cryptography, Public Key
September 25	Part I: Cryptography, Key Agreement
October 2	Part I: Cryptography, Case Studies <i>Exam 1</i>
October 9	Part II: System Security, Applications
October 16	Part II: System Security, Operating Systems
October 23	Part II: System Security, Malicious Software
October 30	Part II: System Security, Forensics and Response <i>Exam 2</i>
November 6	Part III: Network Security, Introduction
November 13	Part III: Network Security, Secure Protocols
November 20	Part III: Network Security, Infrastructure Defense
December 4	Part III: Network Security, Case Studies <i>Exam 3</i>

Grading Policy

ENTS 689I is made up of three parts, each of which is composed of four lectures. Grading will be based primarily on three (3) written exams, administered during the fourth lecture of each section (October 2, October 30, and December 4). Each exam is worth 20% of the final course grade (60% total). Exams are NOT cumulative – each is limited to the topics covered in the three prior lectures. Attendance at all exams is mandatory – no make-up exams will be administered.

Each section will also require at least one homework assignment. Cumulatively, these assignments will comprise the remaining 40% of the final course grade. Late homework, with a penalty of ½ credit, will be accepted up to one week after the original due date.

Course Resources

A list of resources, including the latest version of this syllabus, will be made available on the course web page. Additionally, a course email list will be used for corrections, clarifications, or additional discussions. Since we will only meet once each week, we encourage the use of the email list for questions that may benefit the entire class.

Ethical Computing

Many of the topics discussed in this course will address important real-world issues related to identifying and exploiting flaws in computers, networks, and cryptographic systems. While our focus will be on developing a good understanding of the high-level principles underlying these topics, you will also be introduced to a number of practical tools and techniques for real systems. Introduction to these tools and techniques SHOULD NOT in any way be construed as an invitation or authorization to utilize them on any system that you are not explicitly authorized to use for that purpose. In portions of this course, we will utilize an isolated network to experiment with, and learn about, malicious and defensive software. You should not transfer such software to other systems without fully understanding the implications of your actions and verifying that you are authorized to do so. In short, use your best judgment at all times and ask one of the course instructors if you are unsure. It is YOUR OWN responsibility to adhere to the legal and ethical standards expected by the ENTS program, the University, and society at large.

Academic Dishonesty

You may **discuss** homework problems and general solution strategies with classmates, but when it comes to formulating and writing solutions you must work alone. If you make use of other sources in coming up with your answers you must cite these sources clearly. (This includes papers or books in the literature, friends or classmates, and information downloaded from the web.) Instances of academic dishonesty will be dealt with harshly, will usually result in a hearing in front of a student honor council, and may result in a failing grade.