ECE 8476: Cryptography and Network Security

Electrical and Computer Engineering Department
Villanova University

Time: CEER 314, Monday 3 - 5:30 pm
Instructor: Dr. Danai Chasaki (danai.chasaki@villanova.edu)
Office: Tolentine Hall 435A
Office Hours: M, T 10:30 am - 12:30 pm
Textbook: Cryptography and Network Security: Principles and Practice, Sixth Edition by William Stallings; Prentice Hall, 2013, ISBN 0133354695

Course objectives

The goal for students in this course is to learn the fundamentals of cryptography and network security including: secret key cryptography, public key cryptography and message digests, key management, authentication, cipher techniques, security protocols, attacks and defenses on computer systems.

Grades

The grades will be determined as follows:

Labs (HW)	25%
Midterm	25%
Final	25%
Project presentation	25%

The final grade will be norm-referenced (i.e., "curved").

Class Attendance

The primary teaching method will be class lectures and discussions. The lectures will discuss topics presented in the textbook and cover additional material. Class attendance is expected in every class.

Labs/Homework

Three sets of labs will be assigned during the semester. The assignments will be posted on the class website and announced in class. Students will work individually; the due date for each assignment will be given at the time it is assigned. The reports will be collected at the start of the class in which they are due or latest at the start of the following class.

Exams

There will be two exams, midterm and final, scheduled for the week of Oct. 21st and the week of Dec. 16th respectively. Details will be discussed one week prior to the exam.

Project Presentation

Students are also expected to actively read the state-of-the-art research papers. Each student will research on a "hot" area and submit a 1-3 page proposal before the mid-term exam. Before the final exam submit a 5-10 page summary reporting your findings, and give one presentation to the rest of the class. The schedule of the presentation will be discussed at a later time. The presentations are meant to update fellow students on current trends, technologies, and issues that related to network security. The grades of the presentation come from evaluation from fellow students in the class as well as the instructor. A list of recommended papers will be distributed later in the class. Students are also encouraged to search for their own papers. In this case, you need to get the approval from the instructor for the topic and papers you select to study.

Late Submissions

Assignments are due as posted on the course web page (or stated in the syllabus). Late submissions will not be accepted unless by prior arrangement with the instructor. Scheduling conflicts regarding exams should be reported to the instructor immediately. In case of a medical emergency, late submission or a make-up exam can be requested if a note from a medical professional is provided.

Academic Honesty Policy

Villanova University has an established academic honor code. Please review the code and be aware that I expect students to abide fully by this code: http://www1.villanova.edu/villanova/vpaa/studentservices/policies/integrity/integritypolicy.html

* Note: The instructor reserves the right to make changes to this syllabus throughout the semester.