Fall 2015

CSCI 4621

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CSCI 4621: Computer Security
Fall 2015 Course Syllabus
Dr. Irfan Ahmed

Office Location: Math 347
Office hours: Tuesday/Wednesday/Thursday 10:00-12:00
or by appointment.
Email: irfan@cs.uno.edu

Course Prerequisites:
CSCI 4401, CSCI 4311, and significant programming experience
Most programming will be in C.

Class Meeting:
Math 112, Tuesday/Thursday 3:30PM - 4:45PM

Textbook:
Computer Security: Principles and Practice by William Stallings (Prentice Hall; 3rd edition, 2014)

The textbook is available in the UNO bookstore and is also available at the usual venues, like Amazon.com.

Grading:

Midterm Examination	30%
Final Examination	30%
Assignments	20%
Presentations	5%
Project	15%

Grading Scale:
The following grading scale is used. I never curve. Grading in college courses is objective and based directly on your performance. Please don't ask me to change your grade on an assignment unless you clearly deserve it and can demonstrate that this is the case.

A	**90-100**	**B**	**80-89**	**C**	**70-79**
D	**60-69**	**F**	**0-59**		

Tests:
There will be one midterm and one final. The final examination is based on the material covered after the midterm. Any missed test will receive a grade of zero unless arrangements are made with me.

Exam Dates:
Midterm Exam: October 6, Tuesday 2015
Final Exam: University will schedule the final exam

Assignments: There will be significant reading/laboratory/programming assignments in this course. You should consider the due date for each assignment to be a hard deadline. When the due date arrives, turn in what you have. I do give partial credit, but **late submissions are not accepted.**

Submission procedures will be discussed in class.

Project: You will have to develop a security project during the semester. The project should involve the demonstration of a cyber attack, and/or development of a working prototype of a security solution (that can be borrowed from an existing popular tool, or a research paper, or it can be your own idea).

Initially you will submit a proposal for the project that I will review and approve. The project demonstration will be scheduled later after the midterm.

Project Dates:
Proposal Submission Deadline: September 15, Tuesday 2015
Project demo: TBA

Presentations: You will have to present a paper in the class. I will soon make available a list of papers for you to select one. You will have to prepare presentation slides and submit them to me.

Presentation Dates:
Slides Submission Deadline: September 29, Tuesday 2015
Presentation Date: TBA

Important Note: You will not be allowed to read from your notes or from a piece of paper during your presentation. You have to present and talk to your audience.

Class Materials: The lecture slides will be available via Moodle. Be sure to check the Moodle site frequently.

Topics

Following (major) topics will be covered in the class.

- Overview of Computer Security
- Cryptographic tools
- Buffer Overflow
- User Authentication
- Access Control
- Malware
- Denial of Service Attacks
- Intrusion Detection and Prevention Systems
- Operating System Security and Virtualization
- Network Security
- Digital Forensics (if time allows)
- Usable Security (if time allows)

Learning objectives/outcomes

At the end of the course, the students will gain sufficient understanding of core cybersecurity concepts, different cyber attacks, and their countermeasures.

Academic Integrity policy:

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

Accommodations for Students with Disabilities:

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.