CSCI 4621/5621: Introduction to Cybersecurity
Fall 2020 Course Syllabus

Instructor:	Dr. Phani Vadrevu
Student hours (via Zoom):	Mon, Tue, Wed: 02:00 PM - 04:00 PM ***or by appointment***
Zoom for student hours:	Meeting ID: 977 0391 7048 / Passcode: 264212
Email:	phani@cs.uno.edu

Description: This course covers several topics of cyber security such as: authentication and access control mechanisms; malicious software; encryption, including private- and public-key encryption methods. It will also cover topics such as common software vulnerabilities (such as buffer overflow), network, web and operating-system security. If time permits, we will also cover some security issues in the field of machine learning.

Course Prerequisites:
CSCI 2467 (Systems Programming Concepts), and significant programming experience.

Class Meeting:

We will meet via Zoom. Note that the Zoom meeting information for the class is different from the information for the student hours.
Class hours: Tuesday / Thursday - 11:00 AM to 12:15 PM
Meeting ID: 992 6063 7520
Passcode: 242167

Class Attendance: *Mandatory*

Textbook:
There is no required textbook for this course. The instructor will provide necessary reading materials explicitly required for the course or point to locations where those materials can be found. We will use several reference textbooks. We will list readings from the reference textbooks in the syllabus, but they are entirely optional.

Reference Textbooks:

- *Michael T. Goodrich and Roberto Tamassia,* "Introduction to Computer Security", 1st Ed.
- *Charlie Kaufman, Radia Perlman, Mike Speciner,* "Network Security: Private Communication in a Public World", 2nd Ed.
- *Christof Paar and Jan Pelzl*, "Understanding Cryptography: A Textbook for Students and Practitioners", 1st Ed.

- *James F. Kurose and Keith W. Ross*, "Computer Networking: A Top-Down Approach Featuring the Internet", 5th Ed.
- *Wenliang Du,* "Computer Security: A Hands-on Approach", 1st Ed.

Grading:

Midterm examination	20%
Final examination	20%
Assignments	60%

Grading Scale:

The following grading scale is used. No curve will be used for grading.

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

Examinations (40%):

There will be one midterm exam and one final. The final examination is based on the material covered after the midterm (non-cumulative). Any missed test will receive a grade of zero unless arrangements are made with me.

Exam Dates:
Midterm Exam (20%) : October 8, 2020 (Tentative date)
Final Exam (20%) : December 3, 2020 (Thursday) – 10 AM to 12 PM

Assignments (CTF) (60%):

CTF (Capture the flag) competitions are hacking contests that both test and improve the knowledge of security concepts. They are a fun way to learn and practice skills in security and programming. This course requires you to participate in a semester-long CTF contest that will test your knowledge on various security concepts.

The contest will be divided in the form of 4 assignments. Each assignment will contain multiple CTF challenges presented in increasing level of difficulty. The most difficult challenges will be optional but can earn you some bonus points on your final course grade. The tentative due dates for these four assignments are as follows: September 27, October 14, November 1, November 22.

Class Materials: The slides, additional reading materials and details about evaluation components will all be made available on Moodle. Be sure to check the Moodle site

frequently. Also, frequent updates to course content will be given over e-mail. **Be sure to check your e-mail at least once a day.**

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.

COVID-19 Health-related Class Absences

Students should evaluate their health status regularly, refrain from coming to campus if they are ill, and seek appropriate medical attention for treatment of illness. Students should notify (email) their instructors about their absence as soon as possible, so that accommodations can be made. In the event of COVID-19 illness, students should also complete the Campus Reporting Form https://uno.guardianconduct.com/incident-reporting. Please note that medical excuse may be required at the discretion of the department chair and/or college dean.