

Syllabus

Course Information:

Course Description: The basic concepts in computer security as well as the mechanisms located at the heart of a computer system are presented. Topics covered include privacy and personal information, computer crime, legal and ethical issues in computer security, identification and authentication, cryptography, operating system security, network security, World Wide Web security, and database security.

Prerequisite(s): CS-308 with a minimum grade of C

Credit Hours: 3

Class time: *Monday from 4:15 pm - 6:55 pm*

Class location: *El Centro Campus - Room 202*

Faculty Information:

Instructor: Dr. Graciela Perera

Office Location: Admin Office El Centro or Room 207

Office Hours: My office hours are Monday 3:00pm -4:00pm and Wednesdays from 1:00pm-4:00pm at Admin Office El Centro or Room 207. Generally, my office door is always open and you are very much welcome to stop by. Other times can be done by appointment or by email.

Phone Extension: Main Campus 773-442-4738, El Centro Campus 773-442-4059

E-mail: gperera at neiu dot edu

Course materials:

- Textbook David Basin, Patrick Schaller, and Michael Schlpfer, Applied Information Security: A Hands-on Approach, Springer; 2011 edition (October 28, 2011). ISBN-10: 3642244734 ISBN-13: 978-3642244735
The required Chapters will be provided by Instructor as you do not need to buy.

Course Online Resources:

1. Course Content: Piazza <https://piazza.com>
2. Textbook Chapters will be provided in Piazza:
3. Course Labs: You must buy a \$117 licenses from Testout

Purchase Security Pro with the promotional code 14-380TA.
I have created the online class Fall2016-CS360 for you to enroll.

(a) Instructions for purchasing license

<http://wwwnew.testout.com/resources/student-resources/student-purchase>

(b) Instructions for you to join my class

Recommended Browsers:

Best PC browsers - Internet Explorer 10 or above and Chrome.

Best Mac browsers - Safari and Chrome.

(c) Create and Enroll yourself in the class. You should:

- i. Press the sign up link in main page and create an account.
- ii. Click the "Join a School button.
- iii. Enter at least part of the schools name in the open field and click the search icon.
- iv. Find the school in the search results and click "Join.
- v. Click OK to confirm.
- vi. Enroll in the class by clicking the "Enroll" button.
- vii. Enter at least part of your instructors name and click the search icon.
- viii. Click Select next to the respective instructor.
- ix. Locate your class and click Enroll.
- x. Click Yes to confirm.

(d) Tutorials can be found at

<http://wwwnew.testout.com/resources/student-resources/tutorials>

4. Grades: D2L

Course Objectives: Upon completion of this course, the students should:

1. Describe the twelve basic security principles.
2. Understand security concepts of confidentiality, integrity, availability, and privacy.
3. Explain the various controls available for protection against common Internet attacks.
4. List and explain core security principles of authentication and access control.
5. Describe symmetric and public key cryptosystems.
6. Explain the advantages and disadvantages of symmetric and public key cryptosystems.

Description of Quizzes and Exams, and Final:

- There are three Quizzes with a weight of 10. The first one will be on week 6, the second on week 9, and the last on week 13. The evaluation is either a class written quiz, an oral quiz in groups or can be a short demonstration of the labs in class. The instructor will decide which type of evaluation you will have a week before the evaluation takes place. There is no makeup for the quizzes but there will extra credit quizzes that are specified without notice.
- There are three Testout Security Lab Exams with a weight of 20. In order to be eligible to take the Exam you must do all multiple choice test and laboratories sections a week before the Exam day. The Testout Security Lab Exam will be administered in class or takehome. The instructor will decide which type of Exam you will have the week before the Exam takes place. There is no makeup Testout Security Lab Exam and the date is specified in the outline of the course.
- There is at least one Virtual Machine Labs with a weight of 10. These labs will have lecture time and are due the last three weeks of the semester. These labs will allow you to be introduced to more advanced concepts. The evaluation of these labs is showing the instructor the lab working. For example, running a valid program or executing an valid experiment on Virtual Machines. There is no makeup Virtual Machine Labs. Attendance to each day of the Virtual Machine Labs is required.
- There is 1 point of extra credit to the best notes posted in piazza each week
- The instructor will check the homework that is assigned via a post in piazza. A student who does not try to do the homework will be deducted 2 points from his total grade per homework not completed.
- There is no final exam as course evaluations are hands-on, thus they required time to execute. The final is substituted by accomplishing all hands-on activities by finals week.

Grading Formulae: Grades are weighted as follows:

Grade Items	Weight
Testout Security Lab Exams	60%
Quizzes	30%
Virtual Machine Labs	10%

Weighted Average	Course Grade
90% or higher	A%
80% to 89%	B%
70% to 79%	C%
60% to 69%	D%
0% to 59%	F%

Grading Policies:

- **General**
 - No late work will be accepted under any circumstance.
 - No makeup will be given for any hands-on activity.
 - For all evaluations you will be allowed to bring one page summary of your notes. The page must be hand written front and/or back
 - Computers are not to be used unless instructed to do so.
 - A survey needs to be filled out completely by second class of the semester.
 - Students are expected to work independently and according to their assigned group by the instructor. **Offering** and **accepting** solutions from others is an act of **plagiarism**, which is a serious offense and **all involved parties will be penalized according to the Student Code of Conduct.**
- **Grades**
 - Grades will be maintained in D2L. Students are responsible for tracking their progress by referring to the online gradebook in D2L.
- **Attendance and Absences**
 - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.

Course Policies and Statements:

Absence Policy:

Attendance is required but not noted; be aware that class participation and classwork points cannot be earned or made up if you are not present in class.

Academic Integrity Policy:

By enrolling in this course, you are bound by the NEIU Student Code of Conduct: <http://www.neiu.edu/university-life/student-rights-and-responsibilities/student-code-conduct>. You will be informed by your instructor of any additional policy specific to your course regarding plagiarism, class disruptions, etc.

ADA Statement:

Northeastern Illinois University (NEIU) complies with the Americans with Disabilities Act (ADA) in making reasonable accommodations for qualified students with disabilities. To request accommodations, students with special needs should make arrangements with the Student Disability Services (SDS) office, located on the main campus in room D104. Contact SDS via (773) 442-4595 or <http://www.neiu.edu/university-life/student-disability-services>.

Campus Safety:

Web links to Campus Safety: Emergency Procedures and Safety Information can be found on NEIUport on the MyNEIU tab or as follows: http://homepages.neiu.edu/~neiutemp/Emergency_Procedures/MainCampus/.

Academic Honesty Policy and General Information Summary:

Introduction:

In addition to skills and knowledge, NEIU aims to teach students appropriate Ethical and Professional Standards of Conduct. The Student Code of Conduct exists to inform students of their obligations in upholding the highest standards of professional and ethical integrity. All student work is subject to the Student Code of Conduct. Any attempt to deceive a faculty member or to help another student to do so will be considered a violation of the Student Code of Conduct.

Authorship:

The student must clearly establish authorship of a work. Referenced work must be clearly documented, cited, and attributed, regardless of media or distribution. Even in the case of work licensed as public domain, (See: <http://creativecommons.org/>).

Declaration:

Online submission of, or placing one's name on an exam, assignment, or any course document is a statement of academic honor that the student has not received or given inappropriate assistance in completing it and that the student has complied with the Student Code of Conduct in that work.

Consequences:

An instructor may impose a sanction on the student that varies depending upon the instructor's evaluation of the nature and gravity of the offense. Possible sanctions include but are not limited to, the following: (1) Require the student to redo the assignment; (2) Assign a grade of zero to the assignment; (3) Assign a final grade of "F" for the course.

Accessibility Center:

In compliance with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Northeastern provides reasonable accommodations for persons with disabilities by contacting the Accessibility Center.

Data for Research Disclosure:

Any and all results of in-class and out-of-class homework and examinations are data sources for research and may be used in published research. All such use will always be anonymous.

Course Outline:

The weekly coverage might change as it depends on the progress of the class. However, you must keep up with hands-on labs inside and outside of class.

Week	Check mark	Content
1		<ul style="list-style-type: none">• <i>Topics:</i> Introductions, course information and registration.• Textbook Chapter 1: Security Principles
2		<ul style="list-style-type: none">• <i>Testout Security Lab Sections 1.0 - 2.0</i>• <i>Access control and Identity Management</i>• <i>NO CLASS</i>
3		<ul style="list-style-type: none">• Textbook Chapter 1: Security Principles• Virtual Machine Lab Setup• Testout Practice Exam 1 Sections 1 - 2• DUE before beginning of class at 1 pm• Class starts at 5:30pm
4		<ul style="list-style-type: none">• Virtual Machine Lab Setup• Testout Exam 1 Sections 1 - 2• <i>Testout Security Lab Sections 3, 4, 5.4, 5.5, 9, 11</i>• <i>Cryptography, policy, and Defenses</i>
5		<ul style="list-style-type: none">• <i>Virtual Machine Labs:</i> Textbook Chapter 2 and 3• Virtual Machine Lab Setup and Network Services
6		<ul style="list-style-type: none">• <i>QUIZ 1: Oral quiz in groups selected by instructor</i>• <i>Virtual Machine Labs:</i> Textbook Chapter 2 and 3• Virtual Machine Lab Setup and Network Services
7		<ul style="list-style-type: none">• Testout Exam 2• Sections 3, 4, 5.4, 5.5, 9, 11

Week	Check mark	Content
8		<ul style="list-style-type: none"> • <i>Testout Security Lab Sections 3, 6, 7, 10.4, 10.5</i> • <i>Cryptography, and more Defenses</i> • <i>Virtual Machine Labs:</i> Textbook Chapter 4
9		<ul style="list-style-type: none"> • <i>QUIZ 2: Written individual</i> • <i>Virtual Machine Labs:</i> Textbook Chapter 4 • Authentication
10		<ul style="list-style-type: none"> • <i>Virtual Machine Labs:</i> Textbook Chapter 4
11		<ul style="list-style-type: none"> • <i>Virtual Machine Labs:</i> Textbook Chapter 7 • Authentication
12		<ul style="list-style-type: none"> • <i>Virtual Machine Labs:</i> Textbook Chapter 7 • Public Key
13		<ul style="list-style-type: none"> • <i>QUIZ 3: Written individual</i> • <i>Lab Catch-up</i>
14		<ul style="list-style-type: none"> • <i>Virtual Machine Labs:</i> Textbook Chapter 7 • Public Key
15		<ul style="list-style-type: none"> • Testout Security Lab Exam 3 • Sections 3, 6, 7, 10.4, 10.5
16		<ul style="list-style-type: none"> • <i>NO FINAL</i> • <i>ALL Labs - DUE</i>