CISC7320X – Computer Security

Course Information:

Instructor Information:

- Tzipora Halevi
- halevi@sci.brooklyn.cuny.edu
- Ingersol Hall, room 2156A
- Office Hours: Wednesdays 6:30 pm – 8:00 pm

Online Course Webpage: *http://thalevi.github.io/CISC7320X*

Hours and location:

Wed 8:15 – 10:20 PM	Ingersol Add 236

Course Description:

The course will introduce students to concepts of computer security. Students will learn to analyze threats, attacks and vulnerabilities and become familiar with security policies and computer security mechanisms. The course will cover cryptographic concepts and terminology, malware classification and detection, intrusion detection and more. The course will include presentations as well as projects that will give students hands-on experience with information security practices. Upon completing the course, students will have familiarity with key aspects of information risk and security management, as well as skills and roles within the information security industry.

Course Requirements:

Textbooks:

Security in Computing fifth edition,
Charles P. Pfleeger, Shari Lawrence Pfleeger and Jonathan Margulies, Prentice Hall imprint, Pearson Education, Inc., 2015.

Course Overview:

Introduction to Computer Security: Fundamental Concepts

Primarily a systems perspective

Computer Security layers:
- Operating systems, malicious software, network security, browser security, physical security, security models, applications security
- Cryptographic concepts
- Risk management
- Interdisciplinary aspects relating to computer security: privacy, ethics, legal issues

 Goals:
- Learning to build secure systems.
- Understanding different potential attacks and their impact

System Security Evaluation: -
   Security Goals:
   - o What are they trying to achieve?
   - o What are they trying to prevent and protect against?
   - Threat model:
     - o Who is your adversary? o Who is your attacker? o What types of attacks might they use?
     - o What are their capabilities?
     - o What are their limits? o What is in and out of scope? -   Are the security goals achieved?

Computer Security Model:

- Confidentiality, integrity and availability

Course Structure:

Homework:
There will be frequent assignments during the semester covering the topics discussed in class, from the textbook or on-line searches. There will be at least one longer assignment where the student will be expected to write a paper based on their research
Homework solutions must be legible; Difficult-to-read solutions may be marked off or may not be graded entirely. Typing homework is recommended. **No late homework accepted.**

Exams:

There will be a midterm and a final exam. If an exam cannot be taken at the scheduled time, you are responsible for notifying the instructor before the exam is given. If you cannot reach the instructor, please leave a message with the CIS Department Secretary at 951-5657.

Class Grading:

Homework & Project	33%
Exams & Participation	33%
Final Exam	34%

University Policy on Academic Integrity:

The faculty and administration of Brooklyn College support an environment free from cheating and plagiarism. Each student is responsible for being aware of what constitutes cheating and plagiarism and for avoiding both. The complete text of the CUNY Academic Integrity Policy and the Brooklyn College procedure for policy implementation can be found at www.brooklyn.cuny.edu/bc/policies. If a faculty member suspects a violation of academic integrity and, upon investigation, confirms that violation, or if the student admits the violation, the faculty member must report the violation.

Center for Student Disability Services:

In order to receive disability-related academic accommodations students must first be registered with the Center for Student Disability Services. Students who have a documented disability or suspect they may have a disability are invited to set up an appointment with the Director of the Center for Student Disability Services, Ms. Valerie Stewart-Lovell at (718)951-5538. If you have already registered with the Center for Student Disability Services, please provide your professor with the course accommodation form and discuss your specific accommodation with him/her.

Non-Attendance because of religious beliefs:

The New York State Education Law provides that no student shall be expelled or refused admission to an institution of higher education because he or she is unable to attend classes or participate in examinations or study or work requirements on any particular day or days because of religious beliefs. Students who are unable to attend classes on a particular day or days because of religious beliefs will be excused from any examination or study or work requirements. Students absent from class because of religious beliefs will be provided with equivalent opportunities to make up the work missed; no additional fees may be charged for this consideration.

More information can be found at:

http://www.brooklyn.cuny.edu/web/off_registrar/2019-2020_Graduate_Bulletin.pdf

Student Bereavement Policy:

Students who experience the death of a loved one must contact the Division of Student Affairs, 2113 Boylan Hall, if they wish to implement either the Standard Bereavement Procedure or the Leave of Absence Bereavement Procedure (see below). The Division of Student Affairs has the right to request a document that verifies the death (e.g., a funeral program or death notice).

Typically, this death involves that of a family member, in parallel to the bereavement policy for faculty and staff. However, it is up to the discretion of the Division of Student Affairs to determine if a death outside of the immediate family warrants implementation of the student bereavement policy.

More information can be found at:
http://www.brooklyn.cuny.edu/web/about/initiatives/policies/bereavement.php

Important Dates:

Monday, January27	First day of Spring 2020 classes
Sunday, February 2	Last day to add a course
Wednesday, April 1	Last day to withdraw from course with a W (non-penalty) grade
Tuesday, April 7	Conversion Day –Classes follow a Wednesday Schedule
Friday, May 15	Reading Day
Saturday, May 16	Final Examinations Begin
Friday, May 22	Final Examinations End / End of Spring Semester