NEW YORK CITY COLLEGE OF TECHNOLOGY

COMPUTER SYSTEMS TECHNOLOGY DEPARTMENT

CST 2412 – Security, Privacy, and Ethics

Instructor: Atilio Barreda II

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COURSE DESCRIPTION:

This course introduces security issues that computer professionals and data scientists face today. Students learn about data security and the protection of data from unauthorized access and corruption throughout its lifecycle. The course covers authentication, access models, cryptography, and security issues related to the web, networks, cloud computing, databases, and big data. Legal, ethical, and social concerns surrounding privacy and data governance are central themes.

COURSE OBJECTIVE:

This is the first security course in the data science program at City Tech. It equips students with foundational information security knowledge and introduces how data analytics can support modern security and privacy practices.

PREREQUISITES:

CST 2402 – Introduction to Data Science

REQUIRED TEXTBOOK:

Pfleeger, C. P., Pfleeger, S. L., & Margulies, J. (2015). Security in Computing (5th ed.). Pearson.

RESOURCES:

GitHub Developer Pack

ADDITIONAL READINGS (SHORT EXCERPTS):

• Wendy Hui Kyong Chun — Discriminating Data: Correlation, Neighborhoods, and the New Politics of Recognition (MIT Press, 2021).

• Ruha Benjamin — Race After Technology

Short excerpts will be provided for discussion and in-class reflection.

COURSE GRADING FORMULA:

Component	Weight
Assignments	15%
Final Project (report + presentation)	30%
Quizzes	12%
Participation/Engagement (incl. in-class reflections)	13%
Online Certificate (TEEX AWR173)	15%
Midterm Exam	15%

Total: 100%

ONLINE CERTIFICATE:

Students will complete the TEEX AWR173 Information Security Basics certificate. This is a free, nationally recognized introductory credential that provides practical exposure to core security concepts. It is well suited for undergraduate students and serves as a stepping stone toward certifications such as CompTIA Security+ or ISC2 Certified in Cybersecurity (CC). (Check CSTEP)

FINAL PROJECT:

Each student will complete an individual final project focused on a security, privacy, or ethics topic related to course material. The project includes a written report and an in-class presentation. Milestones will be used to support steady progress.

IN-CLASS REFLECTIONS:

Some class meetings will include short in-class writing reflections based on a reading or video. These are graded for completion only and are intended to support critical thinking and discussion.

TOPICS AND TENTATIVE SCHEDULE:

Week	Topic	Reading
1	Introduction to Information Security	Chapter 1

2	The Need for Security	Selected reading
3–4	Authentication, Access Control, Cryptography	Chapter 2
5	Web Security	Chapter 4
6–7	Network Security	Chapter 6
7	Midterm Exam	Review
8	Databases, Cloud, Big Data Security	Chapters 7–8
9–10	Privacy, Law, and Ethics	Chapters 9 & 11 + Chun/Benjamin
11–12	Data Analytics for Security	Selected reading
13	Data Poisoning and Model Evasion	Selected reading
14	Final Project Presentations	—
15	Final Project Due & Wrap-Up	—

ACADEMIC INTEGRITY AND POLICIES:

Students are expected to uphold City Tech's standards of academic integrity. The course is designed to support learning, growth, and professional responsibility.

Short excerpts from Chun's recent work will be used to connect contemporary data practices, classification, and power to issues of security, privacy, and governance.