

City University of New York – Hunter College

Intro to Cyber Risk

Course Information

#CSCI 39598: Intro to Cyber Risk, In-person and Remote beginning 3/23/2020

Mondays 5:35 – 8:15pm

Bldg/Room HN1001-A

Contact

Jennifer Rothstein, Adjunct Lecturer

Department of Computer Science

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917-596-0866

Virtual Office Hours (by appointment)

Textbooks/Materials/Resources

Required:

Next Level Cyber Security by Sai Huda

<https://www.us-cert.gov/ncas/tips/ST04-001>

<https://cybersecurityventures.com/50-cybersecurity-titles-that-every-job-seeker-should-know-about/>

<https://www.uscybersecurity.net/history/>

<https://www.advisenltd.com/wp-content/uploads/2014/01/cyber-risk-glossary-2013-09-15.pdf>

<https://niccs.us-cert.gov/about-niccs/glossary#A>

<https://www.herjavecgroup.com/wp-content/uploads/2018/12/CV-HG-2019-Official-Annual-Cybercrime-Report.pdf>

<https://www.informationisbeautiful.net/visualizations/worlds-biggest-data-breaches-hacks/>

<https://www.cnbc.com/cdn.ampproject.org/c/s/www.cnbc.com/amp/2019/12/23/stuxnet-target-equifax-worst-breaches-of-2010s.html>

<https://www.nist.gov/cyberframework>

<https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html>

https://www.dfs.ny.gov/system/files/documents/2019/01/cyber_memo_12212018.pdf

<https://www.nysenate.gov/legislation/bills/2019/s5575>

https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB375

<https://www.caprivacy.org/>

<https://www.cdc.gov/phlp/publications/topic/hipaa.html>

<https://lewisbrisbois.com/privacy/US>

<https://gdpr.eu/what-is-gdpr/>

https://www.beazley.com/usa/cyber_and_executive_risk/cyber_and_tech/beazley_breach_response.html

https://policies.dppl.com/policy.php?policy_number=BBR-5A8ED7A3-8OEF#pagenav-ag-1

<https://www.insurancejournal.com/news/international/2019/01/15/514558.htm>

<https://www.ibm.com/downloads/cas/ZBZLY7KL>

https://www.us-cert.gov/sites/default/files/c3vp/crr_resources_guides/CRR_Resource_Guide-IM.pdf

<https://www.wired.com/2015/05/silk-road-untold-story/>

<https://www.bitcoin.com/bitcoin.pdf>

<https://www.cnn.com/2019/10/08/business/ransomware-attacks-trnd/index.html>

<https://www.fbi.gov/investigate/cyber>

<https://www.cisecurity.org/white-papers/security-primer-ransomware/>

<https://www.forbes.com/sites/gilpress/2019/12/03/141-cybersecurity-predictions-for-2020/#242a9a1f1bc5>

Supplemental reading materials provided throughout the semester (up-to-the-minute articles, white papers and video clips)

Prerequisite Courses/Knowledge

Core competencies – any major: data, risk, communications, human factor, technology

Course Objectives & Learning Outcomes

Introduction to Cyber Risk will introduce students to the issues surrounding our global cyber security threat. Students will learn the types of threats that exist and the defenses that are being implemented. Emphasis will be placed on understanding these risks and considering solutions from an interdisciplinary approach.

Upon successful completion of this course, students will be able to:

- Define different types of cyber attacks/schemes
- Describe the potential damage from each type of attack (i.e. protected data, financial data, reputational risk, business interruption costs, intellectual property value)
- Describe the major cyber attacks from the past decade and discuss predictions for 2020
- Understand basic regulations – both US and Global and learn to articulate some of the fines/penalties
- Identify methodologies and actions for implementing the best practices in cyber security
- Discuss the benefits of cyber risk transfer and cyber insurance
- Understand the role of law enforcement in the defense and investigation of cyber crimes
- Deliver an Incident Response Plan
- Consider a career in cyber security

Weekly Schedule of Topics to be Covered

This schedule is subject to change. Students are expected to come to class prepared and ready to participate. **The associated chapters and reading materials should be read ahead of time.**

I will begin each class with a brief discussion (10 min) of a cyber attack that took place during the previous week. Any student who would also like to bring in a story about cyber attacks they've identified from the previous week, will be encouraged to do so.

Week	Date	Topics	Readings/Assignments/Deliverables
1	1/27/2020	Cyber security in our Interconnected World: What is it, What it's not, Why it's important Cyber attacks in Hollywood – movies with cyber security storylines Overview of potential career paths Syllabus overview	(Copies will be handed out during class and discussed) Huda, Chapters 1 & 2 https://www.us-cert.gov/ncas/tips/ST04-001 https://cybersecurityventures.com/50-cybersecurity-titles-that-every-job-seeker-should-know-about/
2	2/3/2020	Cyber Attacks – Definitions, Related Terms	Huda, Chapter 2 – focus on pages 16-17, Chapter 4 https://www.uscybersecurity.net/history/

		and Historical Examples	https://www.advisentld.com/wp-content/uploads/2014/01/cyber-risk-glossary-2013-09-15.pdf https://niccs.us-cert.gov/about-niccs/glossary#A
3	2/10/2020	Attackers: Who are They, What are They After and Why?	Assignment #1: Choose what you think the top two threats are, summarize them and explain why you chose those 2 https://www.herjavecgroup.com/wp-content/uploads/2018/12/CV-HG-2019-Official-Annual-Cybercrime-Report.pdf
4	2/17/2020	SCHOOL CLOSED – NO CLASS	
5 Quiz	2/24/2020	Case Studies	Huda, Chapter 6, 7 10 https://www.informationisbeautiful.net/visualizations/worlds-biggest-data-breaches-hacks/ https://www-cnbccom.cdn.ampproject.org/c/s/www.cnbccom/amp/2019/12/23/stuxnet-target-equifax-worst-breaches-of-2010s.html
6	3/2/2020	Defenses and introduction to Fines and Penalties and Other Legal Obligations: (examples - NIST, NYDFS, HIPAA, FERPA, CCPA, state notification laws)	Huda, Chapter 3 https://www.nist.gov/cyberframework https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html https://www.dfs.ny.gov/system/files/documents/2019/01/cyber_memo_12212018.pdf https://www.nysenate.gov/legislation/bills/2019/s5575 https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB375 https://www.caprivacy.org/ https://www.cdc.gov/phlp/publications/topic/hipaa.html https://lewisbrisbois.com/privacy/US

7	3/9/2020	Defenses and introduction to Fines and Penalties and Other Legal Obligations: (examples - NIST, NYDFS, HIPAA, FERPA, CCPA, state notification laws) (Cont'd)	Finish reading above
8	3/16/2020	NO CLASS	Huda, Chapter 12
9	3/23/2020	Review Group Work re: NIST from 3/9/2020 Global Regulatory Landscape and Fines and Penalties (GDPR) COVID – Cyber Security Risks	https://gdpr.edu/what-is-gdpr/ Check Course Content for Week 10
10	3/30/2020	No Class	Prepare for Midterm
11	4/6/2020 Midterm	Cyber Security Risk Transfer: Cyber Insurance	https://www.beazley.com/usa/cyber_and_executive_risk/cyber_and_tech/beazley_breach_response.html https://policies.dppl.com/policy.php?policy_number=BBR-5A8ED7A3-8OEF#pagenav-ag-1 https://www.insurancejournal.com/news/international/2019/01/15/514558.htm Check Course Content for Week 12
12	4/13/2020	Cyber Insurance (cont'd) Exercise: Data Breach Cost Calculator Exercise	https://www.ibm.com/downloads/cas/ZBZLY7KL https://www.us-cert.gov/sites/default/files/c3vp/crr_resources_guides/CRR_Resource_Guide-IM.pdf

			Check Course Content for Week 13
13	4/20/2020	Ransomware Attacks: Case studies, Frequent, Severe, Types of Attacks and Payments in Bitcoin Introduction to Cryptocurrency & Blockchain	Cyber Insurance Policy Deliverable https://www.wired.com/2015/05/silk-road-untold-story/ https://www.bitcoin.com/bitcoin.pdf https://www.cnn.com/2019/10/08/business/ransomware-attacks-trnd/index.html https://www.cisecurity.org/white-papers/security-primer-ransomware/ Check Course Content for Week 14
14	ASSIGNMENT #2 4/27/2020	Guest Lecturer Webinar - TBD	Assignment #2: Discuss the pros and cons of cryptocurrency and summarize an example of a blockchain transaction https://www.fbi.gov/investigate/cyber Check Course Content for Week 15
15	5/4/2020	Predictions for 2020	https://www.forbes.com/sites/gilpress/2019/12/03/141-cybersecurity-predictions-for-2020/#242a9a1f1bc5 Check Course Content for Week 16
16	5/11/2020	Review for Final	Study!
17	5/18/2020	Final Exam	Final Exam

Grading Policy –

- 10% - 1 quiz
- 10% - At least 5 threads in the Discussion Forums (any forum of your choosing)
- 20% - Midterm
- 20% - Assignments
 - Assignment #1: Choose what you think the top two threats are, summarize them and explain why you chose those 2
 - Assignment #2: Discuss the pros and cons of cryptocurrency and summarize an example of a blockchain transaction

- 20% - Final Exam
- 10% - Insurance Policy Deliverable
- 10% - Participation, attendance

Communication

Preferred method to contact instructor for urgent / non-urgent matters: email

Secondary method to contact instructor for urgent/non – urgent matters: text/call

Response time to outreach for urgent/non-urgent matters – same day

Response time for assignment review – three days

Academic Integrity/Honesty Policy

Hunter College Policy on Academic Integrity (required on all syllabi by Senate resolution) “Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

ADA Policy

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.

Hunter College Policy on Sexual Misconduct

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).

b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-SexualMisconduct-12-1-14-with-links.pdf>

Syllabus Change Policy

Any changes to the syllabus will be provided with at least two weeks advance notice via email and Blackboard.