**Information Security Management**

**MASY1-GC 3220 | 200 | Summer 2024 | 5/20/2024 - 7/1/2024 | Mondays & Wednesdays**

**3 Credit | Online (Sy)**

**Course Site URL:** <https://brightspace.nyu.edu/>

**General Course Information**

**Name/Title:** Assistant Professor Anne Ferraro, She/Her/Hers

**NYU Email:** atf1@nyu.edu

**Class Meeting Schedule:** 5/20/2024 - 7/1/2024 / Mondays & Wednesdays | 08:00am -- 11:00am

**Class Location:** DR- Distance Learning/Sy: Online

**Office Hours:**  Mondays/12pm to 1pm EST using ZOOM email appointment required in advance

**Description**

This course focuses on the importance of protecting data and information in today's digital world as related to strategy and policy, awareness, data classification, ownership, and accountability, monitoring and reporting. The course covers network components that comprise the environment, where the data are input, processed, stored and how the data travel through the Intranet, Extranet, and/or Internet. Upon completion of the course, students learn to assess the impact of data in the digital world, considering the steps that the Government, Corporations, and the Private Sector take to protect information assets. Students gain an understanding of components that comprise network security and how each component provides protection. They become familiar with preventative and detective tools such as anti-malware, ACL, virus protection, cryptography, intrusion detection, audit logs, and logical and physical controls and perform information risk assessments.

**Prerequisites**

1240 - Information Technology and Data Analytics

**Learning Outcomes**

At the conclusion of this course, students will be able to:

* Apply the key principles of information security to the value of data and technologies in the digital world
* Analyze different security frameworks used by Government, Corporations, and the Private Sector to protect digital asset
* Design a digitally secure environment to protect business information assets
* Justify how each digital security component provides protection from threats
* Support the decision to select and use preventive, detective, and responsive security elements
* Perform information security risk assessment to quantify and address high risk occurrences

**Communication Methods**

Be sure to turn on your [NYU Brightspace notifications](https://www.nyu.edu/servicelink/KB0018507) and frequently check the “Announcements” section of the course site. This will be the primary method I use to communicate information critical to your success in the course. To contact me, send me an email. I will respond within 24 hours.

Credit students must use their NYU email to communicate. Non-degree students do not have NYU email addresses. Brightspace course mail supports student privacy and FERPA guidelines. The instructor will use the NYU email address to communicate with students. All email inquiries will be answered within 24 hours.

**Structure | Method | Modality**

There are 12 session topics in this course. The session topics are organized in a way to include each student's participation and information sharing, as well as, learning from the Professor's experiences.

Active learning experiences and small group projects are key components of the course. Assignments, presentations, and online discussion forums will be based on course materials (e.g., readings, videos), lectures, and class discussions. Course sessions will be conducted synchronously on NYU Zoom, which you can access from the course site in [NYU Brightspace](https://brightspace.nyu.edu/).

This course is Online (Sy) and will meet twice a week on Monday and Wednesday, with assignments, announcements and emails being sent through Brightspace. Zoom is the remote instruction platform used at NYU. Students are expected to check email and/or Brightspace at least twice a week for announcements concerning assignments, class changes or cancellations, and other important information. The course will involve lecture/discussions/forum discussions as well as a final project.

**Expectations**

Learning Environment

You play an important role in creating and sustaining an intellectually rigorous and inclusive classroom culture. Respectful engagement, diverse thinking, and our lived experiences are central to this course, and enrich our learning community.

Participation

You are integral to the learning experience in this class. Be prepared to actively contribute to class activities, group discussions, and group assignments.

Assignments and Deadlines

Please submit all assignments to the appropriate section of the course site in [NYU Brightspace](https://brightspace.nyu.edu/). If you require assistance, please contact me BEFORE the due date.

May 29

June 5

June 12

June 19

July 1

CYCLE #1 8am May 20 - May 29

CYCLE #2 8am May 29 - June 5

CYCLE #3 8am June 5 - June 12

CYCLE #4 8am June 12 - June 19

Course Technology Use

We will utilize multiple technologies to achieve the course goals. I expect you to use technology in ways that enhance the learning environment for all students. All class sessions require use of Zoom. All class sessions require use of technology (e.g., laptop, computer lab) for learning purposes.

Feedback and Viewing Grades

I will provide timely meaningful feedback on all your work via our course site in NYU Brightspace. You can access your grades on the course site Gradebook.

Attendance

I expect you to attend all class sessions. Attendance will be taken into consideration when determining your final grade.

Excused absences are granted in cases of documented serious illness, family emergency, religious observance, or civic obligation. In the case of religious observance or civic obligation, this should be reported in advance. Unexcused absences from sessions may have a negative impact on a student’s final grade. Students are responsible for assignments given during any absence.

Each unexcused absence or being late may result in a student’s grade being lowered by a fraction of a grade. A student who has three unexcused absences may earn a Fail grade.

Refer to the [SPS Policies and Procedures page](https://www.sps.nyu.edu/homepage/student-experience/policies-and-procedures.html) for additional information about attendance.

**Textbooks and Course Material**

**Required:** Yuri Diogenes, Erdal Ozkaya, Cybersecurity – Attack and Defense Strategies – Third Edition Published 2022 - Pact Publishing. ISBN: 978-1-80324-877-6

Kindle $21.09 Paperback $39.99

No other materials are required. Students may purchase their book at the NYU bookstore.

**Recommended:** Peter L. Bernstein, Against the Gods the Remarkable Story of Risk, John Wiley & Sons, Inc.; ISBN: 0471295639, Published: 1998

Kindle $13.00 Paperback $ 11.79

**Grading | Assessment**

Your grade in this course is based on your performance on multiple activities and assignments. Since all graded assignments are related directly to course objectives and learning outcomes, failure to complete any assignment will result in an unsatisfactory course grade. All written assignments are to be completed using APA format and must be typed and double-spaced. Grammar, punctuation, and spelling will be considered in grading. Please carefully proof-read your written assignments before submitting them for a grade. I will update the grades on the course site each time a grading session has been completed— typically three (3) days following the completion of an activity.

Primary posts in online Forum (10% individual grade) – Primary posts - initial posting of new topics for discussion in online Forum – Students will be graded based on their primary postings in the online Forum. Grades are not only based on quantity (how many postings you submit) but also the quality of the information posted. Primary posts must allow for dialogue and interaction from other students. The idea of a primary post is to create a lively discussion. If a primary post does not engage others to reply and thereby does not create a discussion thread, that specific posting will be forfeited - not be considered in the student’s grade. Posts must be submitted on a regular frequency.

There will be a 1 point deduction from your grade if all your Primary posts are made on the last two days of the cycle. Doing this, does not allow others to properly read and respond to your contributions.

See schedule above for cycle dates.

Subsequent posts in online Forum (replies to primary posts) (10% individual grade) – Students will be graded based on subsequent postings in the online Forum. Grades are not only based on quantity (how many postings you submit) but also the quality of the information posted. See schedule above.

There will be a 1 point deduction from your grade if all your Subsequent posts are made on the last two days of the cycle. Doing this, does not allow others to properly read and respond to your contributions.

See schedule above for cycle dates.

Note: Each Online Forum Group Discussion is a combination of both primary postings followed by subsequent (replies) postings.

Individual class participation– (10% individual grade) Students will be encouraged to participate in “In the News” current topic discussions and other opportunities during our in-person sessions. Up to 10% of your overall grade can be accumulated based upon the student’s individual contributions in class.

Final Group Presentation (15% group grade and 15% individual grade) – a final Group PowerPoint presentation based on the film selected by each group is due on Monday, July 1. Each Group will be covering a different film. This will provide each group the opportunity to demonstrate what they have learned during the course to specific events presented in the film. Each presentation will be different.

Similar to the Group presentations, students will be graded on both a group effort and an individual basis.

Group grades will be based on group dynamics including their level of collaboration, the effectiveness of the group to define and assume responsibilities, and how they work together – listening and learning from one another.

Individual grades will depend on the student’s activities (both reading and posting) ideas and comments in the online forum, and their part in the in-class presentation.

Note: The part that each team member is presenting is the part that you are individually being assessed on.

All student presentations will be judged by the following criteria:

Quality of the presentation material

Creativity

Clarity

Demonstration of knowledge

Speakers’ delivery ability

A rubric describing the criteria and grading structure is provided in Brightspace.

All assignments are due as indicated. If for any reason, a student cannot meet the assignment deadline, it is the student’s responsibility to communicate to the instructor via email in a timely manner. The instructor will determine the validity of the request and work with the student accordingly. If the student fails to communicate with the instructor or the reason is not deemed valid, the student will receive a failure for that particular assignment.

**DESCRIPTION** **PERCENTAGE**

As learning is conducive to discussions and collaboration, the contributing factors for determining your course grade include:

4 Group Presentations – 40% (20% group grade & 20% individual grade)

Primary Posts in the Discussion Forum – 10% (individual grade)

Subsequent Posts in the Discussion Forum – 10% (individual grade)

Class Participation – 10% (individual grade)

Final Group Presentation – 30% (15% group grade & 15% individual grade)

Total = 100 %

*See the* [*“Grades” section of Academic Policies*](https://www.sps.nyu.edu/homepage/student-experience/policies-and-procedures.html#Graduate1) *for the complete grading policy, including the letter grade conversion, and the criteria for a grade of incomplete, taking a course on a pass/fail basis, and withdrawing from a course.*

**Course Outline**

**Start/End Dates:** 5/20/2024 – 7/1/2024 / Mondays & Wednesdays

**Summer Session One:** 6W1

**Time:** 08:00am -- 11:00am

**No Class Date(s):** Monday – 5/27/2024

**Special Notes**: 06/18/2024 - Legislative Wednesday. Classes meet according to a Tuesday schedule.

**Number of Sessions**: 12

The course will cover the chapters listed below. Prior to each class session, please read the chapter(s) as listed and actively participate in the online discussions with your classmates. Completed assignments, final, and group projects should be uploaded to Brightspace under the Assignments tab when due.

**Note: No classes on Monday, May 27 (Memorial Day Holiday)**

**Session I, Monday, May 20**

Tonight, we will begin our course with:

* Professor and student introductions,
* Identifying group member assignments,
* Discussing book selections, and
* Reviewing assignments and due dates

We will also begin a lecture and our class discussion on…

Topic: DATA A VALUABLE ASSET:

What is data and why should it be protected?

During this session we will discuss the following topics:

the importance of data and why organizations must focus on protecting it

how to begin by performing a data classification exercise,

Students will learn how to identify and classify the different types of data:

Data Classification Types

- Sensitive

- Critical

- Confidential

New Assignments:

Read and discuss in the online Discussion tab of Brightspace - Chapters 1, 2, 3 and 4 from the Cybersecurity textbook

Online Forum Cycle #1 is open today, May 20 – post all your discussions related to the chapters 1, 2, 3, and 4 and any related researched material in this forum until May 29, when this forum cycle will close at 8 am.

Your Group Presentation #1 (15 – 20-minute Power-point) based on your group challenge question #1 is due on May 29 at 7 am.

Note: Each Online Forum Discussion is a combination of both primary postings followed by subsequent (replies) postings.

**Session 2, Wednesday, May 22**

Topic: Conclude: DATA A VALUABLE ASSET:

What is data and why should it be protected?

During this session we will conclude our class discussion on the following topics:

- the importance of data and why organizations must focus on protecting it

- how to begin by performing a data classification exercise,

Students will learn how to identify and classify the different types of data:

Data Classification Types

- Sensitive

- Critical- Confidential

“In the News” discussion and opportunity to score class participation credit.

Assignment Reminder:

Continue to read and discuss in the online discussion tab of Brightspace - Chapters 1, 2, 3 and 4 from the Cybersecurity textbook

Online Forum Cycle #1 remains open until Wednesday, June 5, when this cycle will close at 8am.

Your Group Presentation #1 (15 – 20-minute Power-point) based on your group challenge question #1 is due on Wednesday, May 29.

Note: Each Online Forum Discussion forum is a combination of both primary postings followed by subsequent (replies) postings.

**Monday, May 27 – NO CLASS TODAY**

**Session 3, Wednesday, May 29**

Topic: Challenge Question #1

This session will cover challenge question #1

During this session, the students will l have the opportunity to present their findings related to their Group Challenge Question #1

Following each presentation, the instructor will present additional information and related professional experiences.

All will wrap-up the topic with a lively discussion. All related questions will be answered before we move onto the next topic.

CYCLE #1 GROUP PRESENTATIONS DUE TODAY

CYCLE #1 ONLINE FORUM DISCUSSIONS ARE CLOSED

Each presentation will be followed by a class discussion of each related chapter. At the completion of each discussion, students will have a thorough understanding of the material covered in each chapter of the book. Students will have an opportunity to ask questions and share their opinions.

New Assignments – Read and discuss in the online Discussion tab of Brightspace Chapters 5, 6, 7, and 8 from the Cybersecurity textbook

Cycle #2 Online Forum Discussions from May29 to Wednesday, June 5 opens today. Post all your discussions related to the chapters assigned and any related researched material in the appropriate forum until 8am Wednesday, June 5

Your Group Presentation #2 (15-20-minute Power-point) based on your challenge question is due 7am on Wednesday, June 5.

Note: Each Online Discussion Forum is a combination of both primary postings followed by subsequent (replies) postings.

**Session 4, Monday, June 3**

Topic: HACKERS: What are the Hackers building blocks?

During this session, the student will learn:

- what is foot printing and why it is a hacker’s first step,

- how scanning can be a good tool in the right hands, and

- what does enumeration mean

“In the News” discussion and opportunity to score class participation credit.

Assignment Reminder:

Continue to read and discuss in online Discussion Forum - Chapters 5, 6, 7, and 8 from the Cybersecurity textbook

Cycle #2 Online Discussion Forum continues until Wednesday, June 5 at 8am. Post all your discussions related to the chapters assigned and any related researched material in the appropriate forum until 8am Wednesday, June 5. Your Group Presentation #2 (15-20-minute Power-point) based on your challenge question is due 7am on Wednesday, June 5.

Note: Each Online Forum Discussion is a combination of both primary postings followed by subsequent (replies) postings.

**Session 5, Wednesday, June 5**

Topic: Challenge Question #2

This session will cover challenge question #2

During this session, the students will l have the opportunity to present their findings related to their Group Challenge Question #2

Following each presentation, the instructor will present additional information and related professional experiences.

All will wrap-up the topic with a lively discussion. All related questions will be answered before we move onto the next topic.

CYCLE #2 GROUP PRESENTATIONS DUE TODAY

CYCLE #2 ONLINE FORUM DISCUSSIONS ARE CLOSED

Each presentation will be followed by a class discussion of each related chapter. At the completion of each discussion, students will have a thorough understanding of the material covered in each chapter of the book. Students will have an opportunity to ask questions and share their opinions.

New Assignments:

Read and discuss in online Discussion Forum - Chapters 9, 10, 11 and 12 from the Cybersecurity textbook

Cycle #3 Online Discussion Forum opens today until Wednesday, June 12, when this cycle will close at 8am.

Your Group Presentation #3 (15 – 20-minute Power-point) based on your challenge question #3 is due on Wednesday, June 12.

Note: Each Online Forum Discussion is a combination of both primary postings followed by subsequent (replies) postings.

Assignment Reminder:

FINAL presentations are due Wednesday July 1 – each team must submit their movie choice for approval no later than Monday, June 17

**Session 6, Monday, June 10**

Topic: DATA A VALUABLE ASSET:

What is data and why should it be protected?

During this session, the student will learn:

- where to research the most current regulatory requirements and understand their impact to the process, and

- the importance of senior level sponsorship and the various roles within an organization.

This class will cover the following content:

Regulatory Regulations and/or Requirements

- US Government

- Data Privacy

- SEC Regulations

- Federal Banking Rules

Roles and Responsibilities

- CIO

- CEO

- Senior Management

- System Administrator

- Information Guardians and You

“In the News” discussion and opportunity to score class participation credit.

Assignments – Continue to read and discuss in online Discussion Forum - Chapters 9, 10, 11 and 12 from the Cybersecurity textbook

Cycle #3 Online Discussion Forum opens today until Wednesday, June 12, when this cycle will close at 8am.

Your Group Presentation #3 (15 – 20-minute Power-point) based on your challenge question #3 is due on Wednesday, June 12.

Note: Each Online Forum Discussion is a combination of both primary postings followed by subsequent (replies) postings.

Assignment Reminder:

FINAL presentations are due Wednesday July 1 – each team must submit their movie choice for approval no later than Monday, June 17

**Session 7, Wednesday, June 12**

Topic: Topic: Challenge Question #3

This session will cover challenge question #3

During this session, the students will l have the opportunity to present their findings related to their Group Challenge Question #3

Following each presentation, the instructor will present additional information and related professional experiences.

All will wrap-up the topic with a lively discussion. All related questions will be answered before we move onto the next topic.

CYCLE #3 GROUP PRESENTATIONE DUE TODAY

CYCLE #3 ONLINE DISCUSSION FORUM IS CLOSED

Each presentation will be followed by a class discussion of each related chapter. At the completion of each discussion, students will have a thorough understanding of the material covered in each chapter of the book. Students will have an opportunity to ask questions and share their opinions.

New Assignments:

Read and discuss in online Discussion Forum - Chapters 13, 14, 15, 16 and 17 from the Cybersecurity textbook

Cycle #4 Online Discussion Forum opens today until Wednesday, June 19, and this forum cycle will close at 8am June 19.

Your Group Presentation #4 (15 – 20-minute Power-point) based on your challenge question #4 is due on Wednesday, June 19.

Note: Each Online Forum Discussion is a combination of both primary postings followed by subsequent (replies) postings.

Assignment Reminder:

FINAL presentations are due Monday, July 1 – each team must submit their movie choice for approval no later than Monday, June 17.

**Session 8, Monday, June 17**

Topic: Lateral movement and Privilege Escalation

During this session, the student will learn:

- about lateral movement, and

- privilege escalation methods

This class will cover the following content:

- an introduction of the lateral movement process, and

- avoiding alerts and performing privilege escalation

“In the News” discussion and opportunity to score class participation credit.

Assignments – Continue to read and discuss in the online Discussion tab of Brightspace Chapters 13, 14, 15, 16 and 17 from the Cybersecurity textbook

Your Group Presentation #4 (15-20-minute Power-point) based on your challenge question is due 7am on Wednesday, June 19.

Note: Each Online Forum Discussion is a combination of both primary postings followed by subsequent (replies) postings.

**ALL MOVIE SELECTIONS DUE TODAY**

Assignment Reminder:

FINAL presentations are due Monday, July 1

**Session 9, Wednesday, June 19**

Topic: Topic: Challenge Question #4

This session will cover challenge question #4

During this session, the students will l have the opportunity to present their findings related to their Group Challenge Question #4

Following each presentation, the instructor will present additional information and related professional experiences.

All will wrap-up the topic with a lively discussion. All related questions will be answered before we move onto the next topic.

CYCLE #4 GROUP PRESENTATIONE DUE TODAY

CYCLE #4 ONLINE DISCUSSION FORUM IS CLOSED

Each presentation will be followed by a class discussion of each related chapter. At the completion of each discussion, students will have a thorough understanding of the material covered in each chapter of the book. Students will have an opportunity to ask questions and share their opinions.

No New Assignments:

Assignment Reminder:

FINAL presentations are due Monday, July 1

**Session 10, Monday, June 24**

Topic: Vulnerability Management (VM)

During this session, the student will learn:

- how to create an effective VM strategy and

- understand the importance of keeping an asset inventory

This class will cover the following content:

Asset management, vulnerability assessment and

Reporting and remediation tracking

“In the News” discussion and opportunity to score class participation credit.

No New Assignments:

Assignment Reminder:

FINAL presentations are due Monday, July 1

**Session 11, Wednesday, June 26**

Topic: Security Management (VM)

During this session, the student will learn:

- how to create an effective security program and

- understand the importance of continuous monitoring and reporting

This class will cover the following content:

Security management, Security manager’s list and

Report samples

“In the News” discussion and opportunity to score class participation credit.

No New Assignments:

Assignment Reminder:

FINAL presentations are due Monday, July 1

**Session 12, Monday, July 1**

Topic: Final Presentations

Final presentations are due today. Please submit your final version in Brightspace by 7am.

Groups will deliver their final group presentation based upon the film assigned. After each presentation, there will be an open class discussion

Additional Recommended/Optional Resources:

● ISACA Professional Association website ISACA.org

\*At the discretion of the faculty, the syllabus may be modified to better meet the needs of the students and to achieve the learning outcomes established in the syllabus.

**NOTES:**

The syllabus may be modified to better meet the needs of students and to achieve the learning outcomes.

The School of Professional Studies (SPS) and its faculty celebrate and are committed to inclusion, diversity, belonging, equity, and accessibility (IDBEA), and seek to embody the IDBEA values. The School of Professional Studies (SPS), its faculty, staff, and students are committed to creating a mutually respectful and safe environment (*from the* [*SPS IDBEA Committee*](https://www.sps.nyu.edu/homepage/about-us/idbea/about-idbea.html)).

**New York University School of Professional Studies Policies**

1. Policies - You are responsible for reading, understanding, and complying with [University Policies and Guidelines](http://www.nyu.edu/about/policies-guidelines-compliance.html), [NYU SPS Policies and Procedures](http://sps.nyu.edu/academics/academic-policies-and-procedures.html), and [Student Affairs and Reporting](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/student-services.html).

2. Learning/Academic Accommodations - New York University is committed to providing equal educational opportunity and participation for students who disclose their dis/ability to the [Moses Center for Student Accessibility](https://www.nyu.edu/students/communities-and-groups/student-accessibility.html). If you are interested in applying for academic accommodations, contact the [Moses Center](https://www.nyu.edu/students/communities-and-groups/student-accessibility/academic.html) as early as possible in the semester. If you already receive accommodations through the Moses Center, request your accommodation letters through the [Moses Center Portal](https://www.nyu.edu/students/communities-and-groups/student-accessibility.html) as soon as possible ([mosescsa@nyu.edu](mailto:mosescsa@nyu.edu) | 212-998-4980).

3. Health and Wellness - To access the University's extensive health and mental health resources, contact the [NYU Wellness Exchange](https://www.nyu.edu/students/health-and-wellness/wellness-exchange.html). You can call its private hotline (212-443-9999), available 24 hours a day, seven days a week, to reach out to a professional who can help to address day-to-day challenges as well as other health-related concerns.

4. Student Support Resources - There are a range of resources at SPS and NYU to support your learning and professional growth. For a complete list of resources and services available to SPS students, visit the [NYU SPS Office of Student Affairs site](https://www.sps.nyu.edu/homepage/student-experience/resources-and-services.html).

5. Religious Observance - As a nonsectarian, inclusive institution, NYU policy permits members of any religious group to absent themselves from classes without penalty when required for compliance with their religious obligations. Refer to the [University Calendar Policy on Religious Holidays](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html) for the complete policy.

6. Academic Integrity and Plagiarism - You are expected to be honest and ethical in all academic work. Moreover, you are expected to demonstrate how what you have learned incorporates an understanding of the research and expertise of scholars and other appropriate experts; and thus recognizing others' published work or teachings—whether that of authors, lecturers, or one's peers—is a required practice in all academic projects.

Plagiarism involves borrowing or using information from other sources without proper and full credit. You are subject to disciplinary actions for the following offenses which include but are not limited to cheating, plagiarism, forgery or unauthorized use of documents, and false form of identification

[Turnitin](https://www.nyu.edu/servicelink/KB0018471), an originality detection service in NYU Brightspace, may be used in this course to check your work for plagiarism.

Read more about academic integrity policies at the NYU School of Professional Studies on the [Academic Policies for NYU SPS Students](https://www.sps.nyu.edu/homepage/student-experience/policies-and-procedures.html) page.

7. Use of Third-Party Tools - During this class, you may be required to use non-NYU apps/platforms/software as a part of course studies, and thus, will be required to agree to the “Terms of Use” (TOU) associated with such apps/platforms/software.

These services may require you to create an account but you can use a pseudonym (which may not identify you to the public community, but which may still identify you by IP address to the company and companies with whom it shares data).

You should carefully read those terms of use regarding the impact on your privacy rights and intellectual property rights. If you have any questions regarding those terms of use or the impact on the class, you are encouraged to ask the instructor prior to the add/drop deadline.