

Operational & Financial Risk Analysis

MASY1-GC 3600 | 100 | Spring 2024 | 01/24/2024 - 05/01/2024 | 3 Credits

Modality: In-Person

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

General Course Information

Name/Title: Aishwarya Gupta, Adjunct Instructor

NYU Email: ag5546@nyu.edu

Class Meeting Schedule: 01/24/2024 - 05/01/2024 | Wednesdays | 06:20pm - 08:55pm

Class Location: TBD

Office Hours: By Appointment, NYU Zoom, email, or phone. Please send an email to schedule an appointment.

Description

Today's business environment requires a far more complex Asset Liability Management (ALM) structure to help quantify and manage risk. This course provides an introduction to what risk management means from a business perspective that employs risk management products and from the perspective of the insurance industry. Throughout the course, students learn the fundamental financial tools and techniques necessary to be an effective risk manager in the insurance industry. They also learn the fundamental concepts of financial products including both cash products and their respective derivatives, asset liability management, and actuarial sciences as well as the operational, legal, and regulatory issues that affect the insurance industry.

Prerequisites

1220 – Financial Management

Learning Outcomes

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

- Assess the different types of operational and financial risks
- Plan to anticipate, prevent, and mitigate financial and operational risks
- Apply appropriate internal and external risk management tools and practices
- Assess the impact of the current regulatory environment in managing operational risk
- Create an Asset Liability Management structure for the enterprise

Communication Methods

Be sure to turn on your [NYU Brightspace notifications](#) 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 14 session topics in this course. The session topics are organized into five (5) areas of study: 1) Risk/Return Trade-offs, 2) Financial Markets, 3) Market Risk, Credit Risk, & Other Risks, 4) Regulation, and 5) Other Topics.

Active learning experiences and small group projects are key components of the course. Assignments, papers, and exams will be based on course materials (e.g., readings, videos), lectures, and class discussions. Course sessions will be conducted **in-person**. **You can access from the course site in [NYU Brightspace](#).**

This course is in-person and will meet once a week on 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 case studies. Two major papers/projects are required that will both be done on an individual basis.

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. Active participation in class discussion is an important part of the classroom experience. The goal is to learn from others and allow them to learn from you. All contributions count, including questioning, listening, and responding. Prior to class, make sure you prepare by reviewing the current readings and topics in relation to the course. Other ways to contribute to the class include building on what someone else has said, paraphrasing a point someone has already made and build on it, or disagreeing with someone (including the instructor) in a respectful and constructive way. Be prepared to actively contribute to class activities, group discussions, and work outside of class.

Assignments and Deadlines

Homework #1:	Due: February 14
Homework #2:	Due: April 3
Presentations:	Due: April 17-24

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. Some class

sessions might require use of Zoom. All class sessions require use of technology (e.g., laptop, computer lab) for learning purposes.

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.

Refer to the [SPS Policies and Procedures page](#) for additional information about attendance.

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.

Students who join the course during add/drop are responsible for ensuring that they identify what assignments and preparatory work they have missed and complete and submit those per the syllabus.

Textbooks and Course Materials Required:

Risk Management and Financial Institutions: 6th edition

Author: John C. Hull, Year: 2023, Publisher: John Wiley and Sons, Inc.

ISBN-13: 9781119932482

DIGITAL ISBN-13: 9781119932499

ISBN-10: 1119932483

The Big Short (Inside the Doomsday Machine)

Author: Michael Lewis

Publisher: W. W. Norton & Company, Incorporated – Reprint Edition 2011

ISBN-13: 9780393338829

ISBN-10: 0393338827

Recommended:

- Operational Risk Management: Author: Ariane Chapelle, Publisher: Wiley Finance, 2019
- The Wall Street Journal, BBC News, Bloomberg.Com, CNBC

Other readings will be provided by the instructor in Brightspace

Students can purchase these items through the NYU Bookstore.

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.

<u>DESCRIPTION</u>	<u>PERCENTAGE</u>
Homework	10%
Quizzes	10%
Class Participation	10%
Midterm Exam	25%
Class Project	20%
Final Exam	25%
TOTAL POSSIBLE	100%

Course Outline

#	Date	Material Covered	Readings	Assignment	Due Date
1	24-Jan	Course Introduction Banks	1 2		
2	31-Jan	Insurance Companies & Pension Plan Fund Managers	3 4		
3	7-Feb	Financial Instruments	5		
4	14-Feb	Securitization & the Global Financial Crisis Valuation & Scenario Analysis	7 10	HW #1: Financial Instruments	14-Feb
5	21-Feb	Interest Rate Risk Derivative Risk	14 15		Quiz
6	28-Feb	Scenario Analysis & Stress Testing Estimating Default Probabilities	16 17		
7	6-Mar	Midterm Exam	Chapters 1-5, 7, 10, 14-17		
8	13-Mar	Operational Risk	20		
	20-Mar	No Class: Spring Break			
9	27-Mar	Liquidity Risk Enterprise Risk Management	21 24		Quiz
10	3-Apr	Basel I, II, and Solvency II Basel II.5, Basel III & Other Post-Crisis Changes	25 26	HW#2: Basel Accords	3-Apr
11	10-Apr	Financial Innovation Risk Management Mistakes to Avoid	29 30		
12	17-Apr	The Big Short Presentations			
13	24-Apr	The Big Short Presentations			
14	1-May	Final Exam	Chapters: 20-21, 24-26, 29-30 The Big Short		

Course Outline

Start/End Dates: 01/24/2024 - 05/01/2024 | Wednesday

Time: 06:20pm - 08:55pm

No Class Date(s): Wednesday, 03/20/2024

Special Notes: Spring Break 03/18/24 - 03/24/24

Session 1 - 01/24/24

Part 1: Financial Institutions and their Trading

Chapter 1: Introduction

Chapter 2: Banks

Session 2 – 01/31/24

Part 1: Financial Institutions and their Trading

Chapter 3: Insurance Companies and Pension Plans

Chapter 4: Fund Managers

Session 3 – 02/07/24

Part 2: Financial Markets

Chapter 5: Trading in Financial Markets

Session 4 – 02/14/24

Part 2: Financial Markets

Chapter 7: Securitization & the Global Financial Crisis

Chapter 10: Valuation and Scenario Analysis

DUE: HW # 1: Financial Instruments

Session 5 – 02/21/24

Part 3: Market Risk

Chapter 14: Interest Rate Risk

Chapter 15: Derivative Risk

Session 6 – 02/28/24

Chapter 16: Scenario Analysis and Stress Testing

Chapter 17: Estimating Default Probabilities

Session 7 – 03/06/24

Midterm Exam

Chapters 1-5, 7, 10, 14-17

Session 8 – 03/13/23

Part 5: Other Risks - Operational Risk

Chapter 20: Operational Risk

Spring Break – 03/20/23

Session 9 – 03/27/23

Part 6: Other Risks

Chapter 21: Liquidity Risk

Chapter 24: Enterprise Risk Management

Session 10 – 04/03/23

Part 6: Regulation

Chapter 25: Basel I, Basel II, & Solvency II

Chapter 26: Basel II.5, Basel III and Other Post- Crisis Changes

DUE: HW#2: Basel Accords

Session 11 – 04/10/23

Part 7: Other Topics

Chapter 29: Financial Innovation

Chapter 30: Risk Management Mistakes to Avoid

Session 12 – 04/17/23

Housing Crisis Presentations – Part I

Session 13 – 04/24/23

Housing Crisis Presentations – Part II

Session 14 – 05/01/23

Final Exam

Chapters 16-17, 20-21, 24, 29-30 & The Big Short

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](#)*).

New York University School of Professional Studies Policies

1. Policies - You are responsible for reading, understanding, and complying with [University Policies and Guidelines](#), [NYU SPS Policies and Procedures](#), and [Student Affairs and Reporting](#).
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](#). If you are interested in applying for academic accommodations, contact the [Moses Center](#) 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 as soon as possible (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](#). 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](#).
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](#) 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](#), 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](#) 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.