

School of Administrative Studies
Faculty of Liberal Arts and Professional Studies
Financial Risk Management
Course Number: **AP/ADMS 4509 Section A**
Term: **Fall 2021**

Course Outline

Instructor: Professor Xiaofei Li
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Class Hours: Thursdays, 11: 30 am – 2:30 pm, online

Office Hours: Fridays, 9 am – 11 am, on Zoom

Invite link:

<https://yorku.zoom.us/j/94222029494?pwd=YjFrZGpodjN2SWFSY29pQVFURmVPQT09>

Meeting ID: 942 2202 9494

Passcode: 450527

ESSENTIAL NOTICE: PLEASE READ THIS FIRST

This course is online due to COVID-19. On a weekly basis, I will post the lecture recordings, PowerPoint slides, and supporting documents (if there is any) on eClass (i.e., Moodle). **Our class is asynchronous and an online session at the scheduled class time is not necessary.** You are responsible for studying all the posted course materials and the textbook.

In order to make an online course work, you have to keep working every week rather than leaving everything to the end of the course. You will be responsible for owning and maintaining a computer (*not* a phone) with Internet connection that will allow you to participate in all aspects of this course.

Course Description

Financial risk management is an area of financial services that is growing rapidly across the globe. Identifying and managing financial risks is critical for financial success and ignoring these risks will very likely cause financial failure. This course introduces risk management theory and provides a practical approach to understanding the ways in which risks are quantified and managed.

The first part of the course will present students with the tools used to assess financial risk. Students will attain a good understanding of how risk is measured, how derivatives

and fixed income securities work, and how these securities are used in risk management. The second part of the course will introduce students to risk management concepts such as value at risk (VaR) and stress testing. Students will then learn how to apply these concepts and the tools acquired in the first part of the course to market, credit, operational, liquidity, and enterprise risk management.

By the end of this class, students will be able to master key concepts and issues of financial risk management and to evaluate risk management practices in an industry setting. This course will be particularly useful for those students studying for Financial Risk Manager (FRM®) and/or Professional Risk Manager (PRM®) designations. [However, please note that this course is *not* an FRM and/or PRM prep course.](#)

Prerequisite

ADMS 3531 (Personal Investment Management) is the prerequisite. Both ADMS 4503 (Derivative Securities) and ADMS 4504 (Fixed Income Securities and Risk Management) are also highly recommended to be taken at your convenience.

Student Evaluation

Take-home Midterm Exam I 30%
Take-home Midterm Exam II 30%
Take-home Final Exam 40%

Required Textbook

[*Risk Management and Financial Institutions*](#), fifth edition, John C. Hull, Wiley, 2018, ISBN: 978-1-119-44811-2 (hereafter, *Hull*).

Supplementary Readings

1. [*Value at Risk: The New Benchmark for Managing Financial Risk*](#), third edition, Philippe Jorion, McGraw-Hill, 2007, ISBN-13: 978-0-07-146495-6.
2. [*Financial Risk Manager Handbook*](#), sixth edition, Philippe Jorion, GARP, Wiley, 2011, ISBN: 978-0-470-90401-5.

Please Note: A number of articles will be posted on eClass throughout the course.

Method of Instruction

You are required to think, to analyse, to evaluate, and to apply problem-solving techniques. You are also expected to complete assigned reading before each class.

Calculator

You need a handheld non-programmable calculator that includes basic math functions (e.g., logarithm, exponential, square root, and power functions). It is also helpful if the calculator includes basic financial functions (e.g., PV, FV, and PMT etc.).

Midterm and Final Exams

Midterm exams I and II and final exam are *take-home*. There is *no* make-up midterm exam. Midterm exam I is on **Monday, October 18th, 9 am – 11 am**, which will cover the topics in the **first five weeks**. Midterm exam II is on **Monday, November 15th, 9 am – 11 am**, covering the materials in **Weeks 6 – 9**. Final exam is on **Thursday, December 23rd, 9 am – 12 pm** (i.e., noon). The final exam is **cumulative** and might test every topic in the class. The midterm and final exams have **both quantitative and qualitative** questions. You will need to use **Excel** to solve some exam questions.

If you miss one midterm exam for a legitimate reason, your final exam performance relative to other students in the class will be used to estimate your midterm exam mark. The estimation and any further adjustment will be entirely at the discretion of the Course Director/Area Coordinator and are *not* subject to any appeal. All students who need a passing grade for the course must write the final exam.

Note: It is the policy of the School of Administrative Studies Finance Area that **instructors will not sign a DSA form if a student misses both the midterm and final exams**. Students in this situation will need to petition for a remedy appropriate to their circumstances.

Formula Sheets

Because the midterm and final exams are take-home, formula sheets will *not* be provided at the exams. You may use the formula sheets in the previous terms as a reference. These sample formula sheets are posted on eClass.

Academic Honesty and Integrity

In this course, we strive to maintain academic integrity to the highest extent possible. Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, the representation of another's ideas as your own, etc.). All instances of academic dishonesty in this course will be reported to the appropriate university authorities, and can be punishable according to the Senate Policy on Academic Honesty:

<https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>

Relevant University /LA&PS/ School Regulations

The regulations on many aspects of coursework that apply to you are on this site:

<http://sas.laps.yorku.ca/students/>

You are responsible for understanding and following these regulations.

Deferred Standing – Missed Final Exam

Deferred standing may be granted to students who are unable to write their final examination at the scheduled time. In order to apply for deferred standing in an AP/ADMS class, students must register at:

<http://sas-app.laps.yorku.ca>

The DSA and supporting documentation must be submitted *no* later than five (5) business days from the date of the exam. These requests will be considered on their merit and decisions will be made available by logging into the same link as above. *No* individualized communication will be sent from the School to the students (*no* letter or e-mails).

Tentative Course Schedule

The topic order will be as stated below. Depending on time constraint, some topics may be subject to minor changes.

Week	Date	Topics and Chapter Readings
1	September 9 th	Introduction, Bonds, and Interest Rate Risk <i>Hull</i> , Chapters 1 and 9
2	September 16 th	Futures and Options, and How Traders Manage Their Risks <i>Hull</i> , Chapter 8
3	September 23 rd	Volatility, Correlations and Copulas <i>Hull</i> , Chapters 10 and 11
4	September 30 th	Value at Risk and Expected Shortfall <i>Hull</i> , Chapter 12
5	October 7 th	Market Risk Value at Risk <i>Hull</i> , Chapters 13 and 14
	Take-home	Midterm Exam I covers Weeks 1 - 5

	Midterm Exam I is on October 18th, 9 am – 11 am	
6	October 21 st	Regulation <i>Hull</i> , Chapters 15, 16, and 17
7	October 28 th	Regulation (<i>continued</i>), and Credit Risk I <i>Hull</i> , Chapters 18 and 19
8	November 4 th	Credit Risk II <i>Hull</i> , Chapters 20 and 21
9	November 11 th Take-home Midterm Exam II is on November 15th, 9 am – 11 am	Scenario Analysis and Stress Testing, Operational Risk <i>Hull</i> , Chapters 22 and 23 Midterm Exam II covers Weeks 6 - 9
10	November 18 th	Liquidity Risk, and Model Risk <i>Hull</i> , Chapters 24 and 25
11	November 25 th	Economic Capital, RAROC, and Enterprise Risk Management <i>Hull</i> , Chapters 26 and 27
12	December 2 nd	Financial Innovation, and Risk Management Mistakes to Avoid <i>Hull</i> , Chapters 28 and 29