

School of Administrative Studies
Faculty of Liberal Arts and Professional Studies

AP/ADMS 4509 Financial Risk Management

Fall 2023 – **Course Outline** (last update: September 1, 2023)

PLEASE READ THE OUTLINE CAREFULLY!

Note: Tentative course outline created September 1, 2023. Further revisions may be posted before the first day of classes. ADMS 4509 is in York's fall term from Thursdays, September 7 to Thursday November 30 (Note: no class on October 12 – fall reading week).

Instructor: [Hamid Arian](#)

eClass: Access to the website is granted automatically to enrolled students.

Email: harian@yorku.ca (Note: You **must use your my.yorku.ca email** account. Include ADMS4509 in the subject line and your full name and student number in the body of the message.)

Class hours and office hours:

Our class hours are **Thursday, 11:30 – 14:30 p.m.**, in **ACW 205**. Office hours:

1. may occur after class,
2. on Tuesdays 10:00 – 12:00 pm,
3. over Zoom by appointment.

Important: Should there be any changes to health restrictions, and we are asked to switch to online, I will provide details for Zoom meetings.

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 how risks are quantified and managed. The first part of the course will present students with the tools used to assess financial risk. Students will understand 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 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.**

Prerequisites

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

Student Evaluation

Group Assignments (2)	30%
Quizzes (5)	10% (online, 2% each, excluding the Math Review Quiz)
Midterm Exam	35%
Final Exam	25%

Required Textbook: [Risk Management and Financial Institutions](#), fifth edition, John C. Hull, Wiley, 2018, ISBN: 978-1-119-44811-2 (hereafter, *Hull*). **Supplementary Readings:** [Value at Risk: The New Benchmark for Managing Financial Risk](#), third edition, Philippe Jorion, McGraw-Hill, 2007, ISBN-13: 978-0-07-146495-6. [Financial Risk Manager Handbook](#), sixth edition, Philippe Jorion, GARP, Wiley, 2011, ISBN: 978-0-470-90401-5.

Method of Instruction

This course is designed to be a flipped classroom. We will review the week's main topics and work through the practice problems. To fully benefit from this course, you must complete the assigned readings and solve the practice problems for each class. The course is organized so that you have some graded work almost every week.

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 essential financial functions (e.g. PV, FV, PMT). If you will pursue the CFA designation in the future, note that only two financial calculators are currently allowed for the CFA exams: the Texas Instruments BAII Plus (and BAII Plus Pro), and the Hewlett-Packard 12C (HP-12C).

Assignments

There are two **group assignments**. Groups of 3-4 students must **be formed by the 2nd class** and shouldn't be changed. Assignments are due on the assigned date (more info on submission TBA later). Extensions for submitting an assignment after the due date with a penalty may be granted on a case-by-case basis. Approval must be obtained from the course director before the assignment's due date. Late assignments, if approved, will be penalized by **5% per day** (e.g. if the assignment is marked out of 30 marks and is 2 days late, then 3 marks will be deducted from the total mark).

Quizzes

The **quizzes will all be conducted online**. They will open and close at specific times (see eClass for schedule). More details will be provided in eClass.

Midterm and Final Exams

The **midterm and final exams are closed book and will take place in person**. A formula sheet will be posted on the course website and provided during the exam. To avoid any

conflict with other exams, the **midterm exam is scheduled on Thursday November 2, 11:30 - 14:30 p.m.** . If you miss the midterm exam for a legitimate reason, you will write a cumulative final exam in coverage and weight. There is **NO make-up midterm exam**. Students with a **conflict due to religious reasons** will be accommodated. Please inform the course director in writing by the **third class**.

The final exam will be scheduled by the RO between December 7-21. All students who need a passing grade for the course must take the final exam.

Academic Honesty and Integrity

In this course, we strive to maintain academic integrity to the highest extent possible. Please familiarize yourself with the meaning of academic integrity by completing [SPARK's Academic Integrity](#) module at the beginning of the course. Breaches of academic integrity range from cheating to plagiarism (i.e., the improper crediting of another's work, representing 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.

Finance Area policy on DSA (Deferred Standing Agreement)

It is the policy of the School of Administrative Studies Finance Area that instructors **will not automatically approve a DSA form if you miss both the midterm and final exams**. If the **DSA is denied**, students in this situation must petition for a deferred exam, late withdrawal, or a remedy appropriate to their circumstances.

Relevant University/LA&PS/School Regulations

The regulations on many aspects of coursework that apply to you are:
<http://sas.laps.yorku.ca/students/>

You are responsible for understanding and following these regulations.

Forms and Policies

Attending Physician's Statement form for missed midterm or missed final exam:
http://www.registrar.yorku.ca/pdf/attend_physician_statement.pdf

DSA Form for missed final exam:
http://www.registrar.yorku.ca/pdf/deferred_standing_agreement.pdf

DSA Process and Petitions for ADMS classes: <http://www.yorku.ca/laps/sas/links.html>

Tentative Course Schedule

The topic order will be as stated below. However, if we cannot finish the material listed in a lecture, the remainder will be carried forward to the following one. Dates and topics are *tentative and subject to change with notice*.

Note that the dates for the assignments and quizzes will be posted on the course website.

Lecture	Date	Topics and Chapters Readings
1	September 7	Introduction (not tested), Bonds, and Interest Rate Risk Hull, Chapters 1 – 7 (not tested) and Chapter 9
2	September 14	Bonds, and Interest Rate Risk (continued), Futures and Options, and How Traders Manage Their Risks Hull, Chapters 9 (continued) and 8
3	September 21	Volatility, Correlations and Copulas Hull, Chapters 10 and 11 Assignment 1 is posted
4	September 28	Value at Risk and Expected Shortfall Hull, Chapter 12
5	October 5	Market Risk Value at Risk Hull, Chapters 13 and 14
6	October 19	Regulation Hull, Chapters 15, 16, and 17 Assignment 1 is due
7	October 26	Regulation (continued), and Credit Risk I Hull, Chapters 18 and 19
8	November 2	Midterm Exam: Lectures covered are 1-7. Time: 11:30-14:30 pm Assignment 2 is posted
9	November 9	Credit Risk II Hull, Chapters 20 and 21
10	November 16	Scenario Analysis and Stress Testing, Operational Risk Hull, Chapters 22 and 23
11	November 23	Liquidity Risk, and Model Risk Hull, Chapters 24 and 25 Economic Capital, RAROC, and Enterprise Risk Management Hull, Chapters 26 and 27
12	November 30	Financial Innovation, and Risk Management Mistakes to Avoid Hull, Chapters 28 and 29 Assignment 2 is due
13	TBA	Final exam: Lectures covered are 9-12. Date and Time: December 7-21