School of Administrative Studies
Faculty of Liberal Arts and Professional Studies

AP/ADMS 4509 Financial Risk Management

Fall 2025 – Course Outline

PLEASE READ THE OUTLINE CAREFULLY!

Instructor: **Hamid Arian, PhD, CFA, FRM**
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 **Thursdays, 11:30 – 14:30 p.m.**, in **ACE 003**.
Office hours:

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

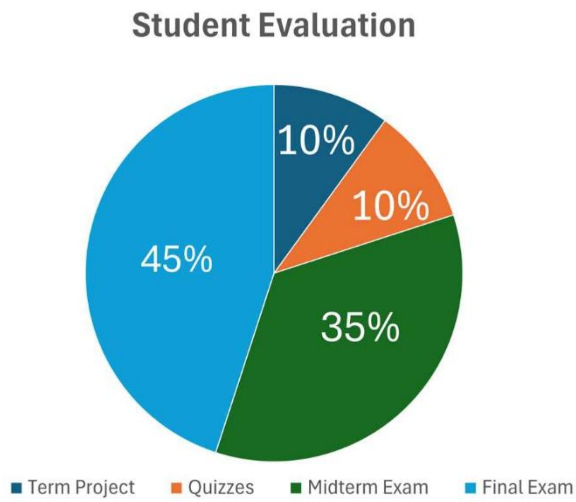
Important: If health restrictions change and we are asked to switch to online meetings, I will provide details for Zoom meetings.

Course Description
Financial risk management is an area of financial services that is growing 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 Professional Risk Manager (PRM®) designations. However, please note that this course is *not* an FRM and PRM prep course.

Prerequisites
ADMS 3531 (Personal Investment Management) is the prerequisite. It is highly recommended that you take both AP/ADMS 4503 (Derivative Securities) and AP/ADMS 4504 (Fixed Income Securities and Risk Management) at your convenience.

Student Evaluation

Term Project	10%
Quizzes (5)	10% (2% each)
Midterm Exam	35%
Final Exam	45%



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

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 two weeks.

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).

Term Projects

There is one **term project**. Groups of **4-7** students must **be formed by the 3rd class** and shouldn't be changed. Each group will do a rehearsal presentation on week 11 and their final presentation on week 12. The details of the projects are posted on eclass.

Quizzes

The **quizzes will all be conducted in person**. We will have two before the midterm and three before the final. Details of the quizzes will be announced on eclass.

Midterm and Final Exams

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**. All students who need a passing grade for the course must take the final exam.

The final exam will be scheduled by the RO. 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*. **All times are in the Eastern Time Zone**. Note that the dates for the assignments and quizzes will be posted on the course website. Please check the announcement section of your course on a regular basis.

Course Timeline

Lecture	Date	Topics and Chapters Readings
1	September 4	Introduction
2	September 11	Bonds, and Interest Rate Risk, Futures and Options, and How Traders Manage Their Risks
3	September 18	Volatility **Term project is posted**
4	September 25	Correlations and Copulas **Quiz 1**
5	October 2	Value at Risk and Expected Shortfall **Quiz 2**
6	October 9	**Midterm Exam: Lectures covered are 1-5** **Time: 11:30 am -2:30 pm** **Location: ACE 003**
		October 12-18: Reading Week
7	October 23	Historical Simulations, EVT, Model Building Approach
8	October 30	Historical Simulations, EVT, Model Building Approach (continued)
9	November 6	Estimating Probabilities of Default
10	November 13	Credit Value at Risk **Quiz 3**
11	November 20	Scenario Analysis and Stress Testing Operational Risk **Quiz 4** **Presentation Rehearsals**
12	November 27	Financial Innovation **Quiz 5** **Term Project Presentations**
Final		**Final exam: Lectures covered are from 6-11.** **Time: TBA Location: TBA**

Appendix A: Quiz Timeline

Quiz	Date	Coverage	Percentage
1	September 25	Interest Rate Risk, Derivatives Risk	2%
2	October 2	Volatility, Correlation & Copulas	2%
3	November 13	HS, EVT, Model Building Approach	2%
4	November 20	Estimating Probability of Default, Credit Value at Risk	2%
5	November 27	Scenario Analysis and Stress Testing, Operational Risk	2%

Appendix B: Project Timeline

	Date	Percentage
Rehearsal	November 20*	10%
Presentation	November 27	

* Your presentation slides should be ready by this date

Appendix C: Feedback and Review Sessions

	Date
Q&A Session for Midterm*	Oct 8th from 2pm-3pm and from 9pm-10pm
Q&A Session for Final**	Dec 4th from 2pm-3pm and from 9pm-10pm

* Midterm Exam is scheduled for Oct 10 - Location: TBA.
** Final Exam is scheduled for Dec 6 – Location: TBA.

Appendix D: Midterm Prep Timeline

Topic	Practice Posted	Solution Posted	Office Hours
Interest Rate Risk	Week 1	Week 3	Tuesdays from 10 am to 12 pm
Derivatives Risk	Week 1	Week 3	Tuesdays from 10 am to 12 pm
Volatility	Week 1	Week 4	Tuesdays from 10 am to 12 pm
Correlation & Copulas	Week 1	Week 5	Tuesdays from 10 am to 12 pm
Value at Risk and ES	Week 1	Week 5	Tuesdays from 10 am to 12 pm

Appendix E: Final Prep Timeline

Topic	Practice Posted	Solution Posted	Office Hours
HS, EVT, Model	Week 7	Week 9	Tuesdays from 10 am to 12 pm
Estimating Probability of Default	Week 7	Week 10	Tuesdays from 10 am to 12 pm
Credit Value at Risk	Week 7	Week 11	Tuesdays from 10 am to 12 pm
Scenario and Stress Testing, Operational Risk	Week 7	Week 12	Tuesdays from 10 am to 12 pm
Financial Innovation	Week 7	Week 12	Tuesdays from 10 am to 12 pm

*Online office hours are held in Zoom: https://yorku.zoom.us/my/harian