School of Administrative Studies

Faculty of Liberal Arts and Professional Studies

Fixed Income Securities and Risk Management

Course Number: **AP/ADMS 4504 M**
Term: **Winter 2026**

Course Outline

Instructor : Saikat Sarkar

Class Hours and Room: Section M, Wednesdays, 11:30 – 2:30 pm, in DB - 0007

TA/Tutor : Zihan Chen

Tutorial Hours: Fridays, 6 – 8 pm, online

Office Hours: Thursdays, 2.30 pm – 3.45 pm, or by appointments

E-mail: **sarkars@yorku.ca**

Course Description

This course introduces you to fixed income securities and markets. Topics covered include: debt securities, risks of investing in bonds, the pricing of fixed income securities, the measurement of interest rate risk, the term structure and volatility of interest rates, mortgage-backed and asset-backed securities, the valuation of mortgage-backed and asset-backed securities, credit analysis, and interest rate derivatives etc. A notable feature of this course is that it is based on the **Chartered Financial Analyst** (**CFA**) curriculum, thus preparing you for writing the fixed income parts of both the Level I and Level II of the CFA exams. This course is both rich in content and fast in pace. Therefore, significant out of class work is required for each of you.

Prerequisites

AP/ADMS 3530 (Finance) and AP/ADMS 3531 (Personal Investment Management) are prerequisites. **You are also highly recommended to take AP/ADMS 4503 (Derivative Securities) at your convenient time**.

Student Evaluation

Attendance and Participation	7.5%
In class Quizzes (5 @ 3.5% each)	17.5%
Assignments (2 @ 7.5% each)	15.0%
Midterm Exam	30.0%
Final Exam	30.0%

Textbooks

Fixed Income Analysis, Fifth Edition, CFA Institute, James Adams, and Donald Smith (edited), John Wiley & Sons, Inc., 2022. (hereafter, **1st**). *Cost: CAD $131.99*

OR

Fixed Income Analysis, *Second Edition*, Frank J. Fabozzi (edited), John Wiley & Sons, Inc., 2007 (hereafter, **2nd**), **used book**.

Supplementary Readings

1. *Bond Markets, Analysis, and Strategies, Tenth Edition*, Frank J. Fabozzi and Francesco A. Fabozzi, The MIT Press, 2021. Cost: $150.00

2. *Fixed Income Securities*: *Tools for Today's Markets*, *Fourth Edition*, Bruce Tuckman, John Wiley & Sons, Inc., 2012. Cost: Around CAD $100

Please note: A number of references will also be posted on the course website throughout the semester. You are required to read these references since they will be tested in the exams.

Method of Instruction

A combination of lectures, discussions and problem solving will be used. PowerPoint slides used in the lectures are available from a link on the course website. Throughout the course, your active participation is encouraged. You are required to think, to analyse, to evaluate, and to apply problem-solving techniques.

Written Assignments

There are two assignments. Assignments will be posted on the course website at least three weeks in advance of the due date. Assignments involve problem-solving and short answers and must be submitted individually in hard copies.

Assignments are due at the start of the class on the assigned date. Late assignments will **NOT** be accepted. If your assignment is late, you will receive a mark of **zero** (**0**). Under **no** circumstances will faxed or photocopied assignments be accepted. **Neither** can an assignment be submitted by e-mail.

Midterm and Final Exams

Both midterm and final exams are **closed book** and involve **problem-solving and short answers**. If you miss a 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. There is NO make up midterm exam. The estimation and any further adjustments will be entirely at the discretion of the Course Director/Area Coordinator and not subject to any appeal. Please be advised that, in accordance with Senate Policy, an Attending Physician form must be submitted for assessments weighted at more than 20% of the course grade. **There will be no makeup quizzes. If you miss a quiz for a legitimate reason, the weight of the missing quiz will be transferred to the final exam.**

Students with a conflict due to religious reasons will be accommodated. Please inform the Course Director in writing by the fourth lecture if you have such a conflict. All students who need a passing grade for the course must take the final exam.

If you miss the final exam, you should submit a Deferred Standing Agreement (as described in the next section) if you have written the mid-term exam. It is the policy of the Admin Studies Finance Area that instructors will NOT sign a DSA form if you miss both the midterm and final exams. Students in this situation will need to petition for a remedy appropriate to their circumstances.

If you think an error has been made in the marking and you would like the course director to look at it again, then please submit a written request in an email for a review with valid reasons for the review.

Financial Calculator

A financial calculator is required. If you will pursue the CFA designation in the future, note that only two types of calculators are currently allowed for the CFA exams: the Texas Instruments BAII Plus (BAII Plus) and the Hewlett-Packard 12C (HP-12C).

Formula Sheets

The formula sheets that you will need for both the midterm and final exams will be posted on the course website at least one week prior to the exams. Do **not** bring the formula sheets to the exams with you. You will be provided with copies of the formula sheets at the exams.

Attendance and Participation:

Attendance (including active participation) is important for learning. You are expected to attend each in-person lecture and encouraged to participate actively in class. 7.5 marks will be based on attendance (0.5 for each of 7 sessions, totaling 3.5 marks), and participation (3 marks) based on my subjective assessment of your class participation (includes asking meaningful questions, answering my questions or adding comments). Attendance will not be taken on quiz dates. Please do not make any assumptions here. One could receive a low mark even if one has attended every class because of failure to participate actively.

Tutorial Schedule:

No.	Tutorial Date	Day	Time	Mode of delivery
1	January 16th	Friday	6.00 pm – 8:00 pm	Online
2	February 6th	Friday	6.00 pm – 8:00 pm	Online
3	February 27th	Friday	6.00 pm – 8:00 pm	Online
4	March 13th	Friday	6.00 pm – 8:00 pm	Online
5	April 3rd	Friday	6.00 pm – 8:00 pm	Online

Tentative Course Schedule

The topic order will be as stated below. However, if we cannot finish the material listed in a week, the remainder will be carried forward to the following week. Depending on time constraint some topics may be subject to minor changes.

Dates	Topics	Chapters in Textbook
Week 1 January 7	Features of Debt Securities and Risks in Bond Investments	1st Chapter 1, or 2nd Chapters 1 and 2
Week 2 January 14	Overview of Bond Sectors, and Understanding Yield Spreads **Assignment 1 will be posted on January 14th**	1st Chapter 2, or 2nd Chapters 3 and 4
Week 3 January 21	Introduction to the Fixed Income Valuation, and Duration and Convexity	1st Chapters 3 and 5, or 2nd Chapters 5 and 7
Week 4 January 28	Yield Measures, Spot Rates, and Forward Rates ➢ Quiz 1 (Week 1 – Week 3)	1st Chapters 3 and 7, or 2nd Chapter 6
Week 5 February 4	Term Structure and Volatility of Interest Rates	2nd Chapter 8
Week 6 February 11th	Binomial Model and Convertible Bonds **Assignment 1 is due on February 11th** ➢ Quiz 2 (Week 4 – Week 5)	1st, Ch. 8 Sections 8.1 – 8.6 and Ch. 9 Sections 9.1– 9.6, or 2nd Chapter 9
Feb. 14 – 20	Reading Week - No classes at York	
Feb. 21, Saturday	**Midterm exam, 6:00pm to 8:00pm** **In-person on the Keele campus**	**See details on eClass**

Dates	Topics	Chapters in Textbook
Week 7 February 25	Mortgage-Backed Securities	1st Chapter 4.5 – 4.7, or 2nd Chapter 10
Week 8 March 4	Asset-Backed Securities ➢ Quiz 3 (Week 6 – Week 7)	1st Chapter 4, Chapter 11, or 2nd Chapter 11
Week 9 March 11	Monte Carlo Simulation Model **Assignment 2 will be posted on March 11th**	1st Chapter 8 Section 8.4, or 2nd Chapter 12
Week 10 March 18	General Principles (or Fundamentals) of Credit Analysis ➢ Quiz 4 (Week 8– Week 9)	1st Chapter 6 or 2nd Chapter 15
Week 11 March 25	Credit Analysis Models	1st Chapter 10, 2nd Chapter 15
Week 12 April 1	Modelling the Term Structure of Interest Rates, and Interest Rate Derivatives **Assignment 2 is due in the last class on April 1st** ➢ Quiz 5 (Week 10 – Week 11)	1st Chapter 7.5 – 7.7, or 2nd Chapter 13,
April 8 - 24	**Final exam – Registrar's Office will schedule date/time, in-person on the Keele campus**	See details on eClass

RELEVANT UNIVERSITY REGULATIONS

Deferred Exams – 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).

It is the policy of the SAS finance area that instructors will NOT sign a DSA form if you miss one (or both) midterm exams and the final exam. Students in this situation will need to petition for a deferred exam, late withdrawal or a remedy appropriate to their circumstances.

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.