

**School of Administrative Studies
Faculty of Liberal Arts and Professional Studies**

AP/ADMS 4504 Fixed Income Securities

Fall 2021 – Course Outline (updated: August 8)

PLEASE READ THE OUTLINE CAREFULLY

Note: Tentative course outline revised August 8, 2021. Further revisions may be posted before the first day of class. The fall term goes from Wednesday September 8 to Tuesday December 7.

Instructor: Nabil Tahani, Ph.D.

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

Email: ntahani@yorku.ca (Note: You **must use your my.yorku.ca email** account. Include ADMS4504 in the subject line and include your **full name** and **student number** in the body of the message.)

Class hours and office hours:

Remote learning format is used for this course. There will be no in-person interactions or activities on campus. We will have **Zoom interactive classes (synchronous)** during the following times and these **sessions will be recorded:**

- **Class on Mondays, 11:30–2:30pm (section A)** and **4:00–7:00pm (section B)**
- **Office hours:** You can make an appointment for an individual Zoom meeting.

Note that although the sessions will be recorded and posted on Moodle, **you will receive a better learning experience if you attend the interactive sessions.**

Zoom and technical requirements for taking the course:

You **must register for Zoom** before the start of the course. York University has a license for Zoom for faculty members and students. We will provide you with the link to be able join the sessions. You are not required to join through video, but you will need the audio. Note that in order to minimise any background noise, **all participants will be muted when joining a Zoom lecture session**, and **unmuted** if they want to speak or ask questions. Here are some useful links for student computing information, resources and help:

[Student Guide to Moodle](#)

[Zoom@YorkU Best Practices](#)

[Zoom@YorkU User Reference Guide](#)

[Computing for Students Website](#)

[Student Guide to eLearning at York University](#)

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. It is recommended that you take AP/ADMS 4503 concurrently with or before this course.

Student Evaluation

Group Assignments (2)	20%
Quizzes (5)	10% (2% each)
Midterm Exam	30%
Final Exam	40%

Required Textbook:

- *Fixed Income Analysis*, fourth edition, Barbara S. Petitt, John Wiley & Sons, Inc., 2019, ISBN: 978-1119627289; **or** 3rd edition, James F. Adams, and Donald J. Smith; **or** 2nd edition, Frank J. Fabozzi (edited), John Wiley & Sons, Inc., 2007, ISBN: 978-0470052211

Supplementary Readings

- *Bond Markets, Analysis, and Strategies*, ninth edition, Frank J. Fabozzi, Pearson Education Inc., 2016.
- *Fixed Income Securities: Tools for Today's Markets*, second edition, Bruce Tuckman, John Wiley & Sons, Inc., 2002.
- A number of articles will also be posted on the course website throughout the semester. You are required to read these references since they may be tested in the exams.

Method of Instruction

A combination of (online) lectures, discussions and problem solving. Powerpoint slides will be available on the course Moodle website. Throughout the course, your active participation is encouraged. You are required to think, to analyze, to evaluate, and to apply problem-solving techniques. You are also expected to complete assigned readings and/or problem-solving materials for each class. *We may change some aspects of this course as we work through it in these extraordinary circumstances. In order to make an online course work, you must keep working every week rather than leaving it all to the end of the course, and we have organised the course so that you will have some work for grading 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 also is helpful if the calculator includes basic 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 and must be submitted through Moodle. Extensions for submitting an assignment after the due date with penalty may be granted on a case-by-case basis. Approval must be obtained from the course director prior to the due date of the assignment. 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). No assignments will be accepted after the solution has been made available.

Quizzes, Midterm and Final Exams

The quizzes, midterm and final exams will all be **conducted online through Moodle** (more details later).

The **quizzes will open and close at specific times** (the schedule will be posted in Moodle), but once started you **will have one hour to complete the quiz in one attempt**.

The **midterm exam is scheduled on Sunday October 24, 9:00-11:30am**.

The final exam **will be scheduled by the RO**. The exam period is December 9-23.

If you **miss the midterm exam** for a legitimate reason, you will write a **cumulative final exam in coverage and in 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.**

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, 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.

Finance Area policy on DSA (Deferred Standing Agreement)

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 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 on:

<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/times for the assignments and quizzes will be posted on the course website.

Lecture	Date	Topics and Chapters Readings
1	Sept 13	Features of Debt Securities and Risks in Bond Investments: 4 th Chapter 1; or 2 nd Chapters 1 and 2
2	Sept 20	Overview of Bond Sectors, and Understanding Yield Spreads: 4 th Chapter 2; or 2 nd Chapters 3 and 4
3	Sept 27	Introduction to Fixed Income Valuation, and Duration and Convexity: 4 th Chapters 3 and 5; or 2 nd Chapters 5 and 7
4	Oct 4	Yield Measures, Spot Rates, and Forward Rates: 4 th Chapters 3 and 7; or 2 nd Chapter 6
5	Oct 18	Term Structure and Volatility of Interest Rates: 4 th Chapter 7; or 2 nd Chapter 8
Sunday Oct 24		Midterm Exam: Lectures covered are 1-5. Time: 9:00-11:30am
6 & 7	Oct 25, Nov 1	Binomial Model and Convertible Bonds: 4 th Chapters 8 and 9; or 2 nd Chapter 9
8	Nov 9	Asset-Backed Securities: MBS, CMO, ABS and CDO: 4 th Chapter 4; or 2 nd Chapters 10 and 11
9 & 10	Nov 15, 22	Monte Carlo Simulation Model: Valuing MBS and ABS: 4 th Chapter 8 (section 8.4); or 2 nd Chapter 12
10 & 11	Nov 22, 29	Modelling the Term Structure of Interest Rates, and Interest Rate Derivatives: 4 th Chapter 7; or 2 nd Chapter 13
12	Dec 6	General Principles and Models of Credit Analysis: 4 th Chapters 6 and 10; or 2 nd Chapter 15