

School of Administrative Studies
Faculty of Liberal Arts and Professional Studies

AP/ADMS 4503 Derivative Securities

Winter 2022 – Course Outline

PLEASE READ THE OUTLINE CAREFULLY

Note: Tentative course outline revised November 30, 2021. Further revisions may be posted before the first day of winter classes. ADMS 4503 is in York's 12-week.

Instructor: Vikram Iyer, CFA

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

Email: viyer@yorku.ca (Note: You *must use your my.yorku.ca email* account. Include ADMS4503 in the subject line and include your **full name** and **student number** in the body of the message.)

Class hours and office hours:

In-person teaching is used for all Winter 2022 York courses.

- **Mondays : Section M 4pm–7pm, Section N: 7pm –10pm**
Location for Section M is HNE 036
Location for Section N is DB 0016

Course Description

The financial world has witnessed continual innovations since the mid-seventies with new securities called derivatives. These securities, among which we find futures and forward contracts and options, are traded on basic underlying assets such as stocks, bonds, commodities, interest rates and currencies. Their lower costs as well as the innovative profits they offer, make them very attractive and useful in speculative and hedging strategies. This course will introduce these derivatives and students will have a good knowledge of how these contracts work, how they are used, and how they are priced. Individuals who are skilled at analysing derivatives are in high demand in financial centres throughout the world.

Prerequisites

ADMS3530 (Finance) and ADMS3531 (Personal Investment Management) are prerequisites.

Student Evaluation

Mid Term Assignment (Group)	5%
Final Term Assignment (Group)	5%
Full Term Project (Group)	20%
Midterm Exam	30%
Final Exam	40%

Required Textbook: [Options, Futures and Other Derivatives](#), 10th Edition (or any edition after 5th), John C. Hull, Pearson Prentice Hall, 2017, ISBN: 0-13-447208-X. The [Student Solutions Manual](#), 10th Edition (or any edition after 5th), ISBN: 0-13-462999-X, which contains solutions to all end-of-chapter questions and problems (*but not the assignment questions*) is **recommended**.

Method of Instruction

A combination of 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.

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 and one group full term project**. Groups of **5 to 8** students from the same section 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 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.

Midterm and Final Exams

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*. **All times are in the Eastern Time Zone.**

Lecture	Date	Topics and Chapters Readings
1	Jan 10, 4pm and 7pm	Introduction to Derivative Securities - Hull 1, 2
2	Jan 17, 4pm and 7pm	Option Trading Strategies - Hull 12 Assignment 1 to be posted
3	Jan 24, 4pm and 7pm	Futures & Forward Prices – Hull 5 Value of Futures contracts – Hull 5 Full Term Project posted
4	Jan 31, 4pm and 7pm	Value of Futures contracts – Hull 5
5	Feb 7, 4pm and 7pm	Hedging with Futures - Hull 3 Assignment 1 due in class
6	TBA	Mid Term Exam
	Feb 21	No class (Family Day Holiday)
7	Feb 28, 4pm and 7pm	Option Price Properties - Hull 11 Assignment 2 to be posted
8	Mar 7, 4pm and 7pm	Binomial Model of Option - Hull 13, 21
9	Mar 14, 4pm and 7pm	Binomial Model of Option - Hull 13, 21 The Black-Scholes-Merton Model: Options on Stocks and Other Assets, Chapters 15, 17 and 18
10	Mar 21, 4pm and 7pm	The Black-Scholes-Merton Model: Options on Stocks and Other Assets, Chapters 15, 17 and 18
11	Mar 28, 4pm and 7pm	Hedging, Volatility Smiles and Monte-Carlo Simulation, Chapters 19 and 20
12	Apr 4, 4pm and 7pm	Full Term Project: Students make Group Presentations in Class Assignment 2 also due in class
13	TBA	Final exam: Lectures covered are from 7-12. Time: TBA