

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

**AP/ADMS 4503 Derivative Securities**

**Summer 2022 (S1) – Course Outline** (last update: April 11)

**PLEASE READ THE OUTLINE CAREFULLY**

***Note:** Tentative course outline created April 11, 2022. Further revisions may be posted before the first day of summer classes. ADMS 4503 is in York’s 6-week S1 term which goes from Monday May 9 to Monday June 20 (*Monday May 23 is a holiday*).*

**Instructor:** [Nabil Tahani, Ph.D.](#)

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

**Email:** [ntahani@yorku.ca](mailto:ntahani@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:**

As of today, ADMS 4503 is scheduled to be back to **in-person** format on campus. Our class hours are **Mondays and Thursdays, 11:30 – 2:30 pm**, in **DB 0007**. Office hours may take place after class or 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**

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**

**AP/ADMS 3530** (Finance) and **AP/ADMS 3531** (Personal Investment Management) must be **completed with a passing grade** before taking the course.

**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:** *Options, Futures and Other Derivatives*, 11<sup>th</sup> or 10<sup>th</sup> editions (or any edition after 5th), John C. Hull, Pearson Prentice Hall. The *Student Solutions Manual*, 10th Edition (or any edition after 5th), which contains solutions to all end-of-chapter questions and problems is **recommended**.

### Method of Instruction

This course is designed to be a **flipped classroom**. We will review the main topics of the week and work through the practice problems (posted with slides ahead of the lecture). To fully benefit from this course, you are expected to complete the assigned readings and solve the practice problems for each class. The course is organised 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 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 2<sup>nd</sup> 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).

### 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 **will be provided** during the exam. In order to avoid any conflict with other exams, the **midterm exam is scheduled on Monday June 6, 11:30am-2:30pm**. 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**.

**The final exam will be scheduled by the RO between June 22-24**. 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 School of Administrative Studies Finance Area that instructors **will not automatically approve a DSA form if you miss both the midterm and final exams. In case the DSA is denied**, students in this situation will need to 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 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](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](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	May 9	Brief Introduction, Chapter 1 Mechanics of Options Markets, Chapter 10 (self-study) Review of Basic Financial and Mathematical Concepts (self-study)
2	May 12	Properties of Stock Options, Chapter 11 Trading Strategies involving Options, Chapter 12
3	May 16	Trading Strategies involving Options, Chapter 12 (cont'd)
4	May 19	Introduction to Binomial Trees, Chapters 13 and 21
5	May 26	Introduction to Binomial Trees, Chapters 13 and 21 (cont'd)
6	May 30	The Black-Scholes-Merton Model: Options on Stocks and Other Assets, Chapters 15, 17 and 18
7	Jun 2	Hedging, Volatility Smiles and Monte-Carlo Simulation, Chapters 19 and 20
8	<b>Monday Jun 6</b>	<b>Midterm Exam: Lectures covered are 1-7. Time: 11:30am-2:30pm</b>
9	Jun 9	Mechanics of Futures and Forward Markets, Chapter 2 Determination of Futures and Forward Prices, Chapter 5
10	Jun 13	Determination of Futures and Forward Prices, Chapter 5 (cont'd)
11	Jun 16	Determination of Futures and Forward Prices, Chapter 5 (cont'd) Hedging Strategies Using Futures, Chapter 3
12	Jun 20	Hedging Strategies Using Futures, Chapter 3 (cont'd)
13	<b>TBA</b>	<b>Final exam: Lectures covered are 9-12. Date and Time: TBA</b>