



**BUSI 3512 C  
WINTER 2017  
DERIVATIVES**

**Instructor:** Dr. Yuriy Zabolotnyuk, CFA, FRM  
**Office:** Dunton Tower 1713  
**Office Hours:** Wednesday 1.35pm-2.25pm or by appointment  
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**Phone Number:** (613) 520-2600 ext 3206

**Course meets:** Wednesday 2:35pm-5:25pm in TB236

**Pre-requisites & precluded Courses:** BUSI 2504 and BUSI 2505 with a grade of C+ or higher in each and STAT 2606 and ECON 2009 with a grade of C- or higher.

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**Calendar Description:**

Derivative instruments and their use for speculation and hedging. Analysis of different markets where instruments trade, and their characteristics. Pricing models highlighted to determine how individuals and corporations can better manage risk; exotics and newer innovations.

**Course Description and Objectives:**

This is an introductory course on derivative securities. The course will focus on options, forward and futures contracts, and swaps. We will look at how derivatives can be used for hedging risk. We will study the organization of derivatives markets, relevant trading strategies and the pricing models applicable to these securities.

**Textbook:**

John Hull, *Options, Futures, and Other Derivatives*, 9th ed., Prentice Hall, 2014.

**Grading Scheme:**

In-class quizzes (best 3 of 4)	20%
Options trading simulation	10%
Mid-term exam	25-30%
Final exam	40-45%
Total	100%

***Expectations:***

The course will require you to both understand the economic intuition of financial concepts and to perform mathematical calculations.

(1) **Reading** – You are expected to have covered the readings before class. After class, you should re-read the chapter to gain a complete understanding of the material.

(2) **Sample Problems** – Finance cannot be learned without solving problems. To ensure that you understand the material, sample problems will be given. These problems will NOT be graded. However, it is strongly recommended that you try solving the assigned problems as they will help you in preparation for quizzes and exams. Group work on the sample problems is encouraged.

***Notes on Examinations and Quizzes***

The mid-term test and the final exam will cover both the theory and application of topics covered in classes and the readings. The mid-term test and final examination are closed-book and closed-notes. Students are allowed to bring in a TI BAII plus calculator only. The final exam will be comprehensive. Both midterm and final will consist of multiple choice and short essay/problem type questions. The date for the final exam will be posted by the University later in the semester. Quizzes are designed to focus on material that was just covered. They will be approximately 20 minutes in length.

***Exam and Quiz Attendance***

If a student is unable to sit for a quiz or mid-term test due to verifiable illness (or, in rare cases, some other circumstances beyond your control), the mark allocation to that quiz will be allocated to remaining quizzes; the mark allocation for the mid-term test will be allocated to the final exam. If a student is unable to sit for the final exam, the student may apply to the Registrar's Office to write a deferred examination. Deferral final examination will only be granted to students showing satisfactory in-term performance (as described below). Please also see Sections 2.4, 2.5 and 2.6 of the Undergraduate Calendar. It should be noted that deferred examinations are not granted to students who make travel plans that conflict with the examination period.

**Satisfactory In-term Performance**

1. The criterion and the standard for Satisfactory In-term Performance are as follow:  
50% of total pre-final exam work (cumulative) marks. This includes total marks for all quizzes and midterm exam.

2. Unsatisfactory In-term Performance in this course will lead to

Failure in this course (regardless of the performance at the Final exam or final project)

**No**

FND grade in this course (in case of missed Final exam)

**Yes**

## COURSE SCHEDULE (TENTATIVE AND SUBJECT TO CHANGES)

<b>Date</b>	<b>Topic</b>	<b>Chapter in Hull</b>
Jan.11	Mechanics of Options Markets	10
Jan.18	Properties of Stock Options	11
Jan.25	Trading Strategies Involving Options <b>Quiz 1</b>	12
Feb.1	Binomial Trees	13
Feb.8	The Black-Scholes-Merton Model <b>Quiz 2</b>	15
Feb.15	<b>MIDTERM (in class)</b>	
Feb.22	<b>Winter break. No classes.</b>	
Mar.1	Mechanics of Futures and Forward Markets	2
Mar.8	Hedging Strategies Using Futures <b>Quiz 3</b>	3
Mar.15	Determination of Forward and Futures Prices	5
Mar.22	Swaps <b>Quiz 4</b>	7
Mar.29	Credit Derivatives	25
Apr.5	Final Exam Review (time permitting)	22

### ADDITIONAL INFORMATION

#### **Course Sharing Websites**

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

#### **Required calculator in BUSI course examinations**

If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

#### **Group work**

The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

WDN = Withdrawn from the course

ABS = Student absent from final exam

DEF = Deferred (See above)

FND = (Failed, no Deferred) = Student could not pass the course even with 100% on final exam

### **Academic Regulations, Accommodations, Etc.**

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

### **Requests for Academic Accommodations**

*For Students with Disabilities:*

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your **Letter of Accommodation** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). **Requests made within two weeks will be reviewed on a case-by-case basis.** After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website ([www.carleton.ca/pmc](http://www.carleton.ca/pmc)) for the deadline to request accommodations for the formally-scheduled exam (*if applicable*).

*For Religious Obligations:*

Students requesting academic accommodation on the basis of religious obligation should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory event.

Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student.

Students and instructors can confirm accommodation eligibility of a religious event or practice by referring to the Equity Services website (<http://carleton.ca/equity/accommodation/religious-observances/>) for a list of holy days and Carleton's Academic Accommodation policies. If there are any questions on the part

of the student or instructor, they can be directed to an Equity Services Advisor in the Equity Services Department for assistance.

*For Pregnancy:*

Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

**Academic Integrity**

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another’s ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated. Penalties may include; a grade of Failure in the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <http://carleton.ca/studentaffairs/academic-integrity>.

**Sprott Student Services**

The Sprott student services office, located in 710 Dunton Tower, offers academic advising, study skills advising, and overall academic success support. If you’re having a difficult time with this course or others, or just need some guidance on how to successfully complete your Sprott degree, please drop in any weekday between 8:30am and 4:30pm. Our advisors are happy to discuss grades, course selection, tutoring, concentrations, and will ensure that you get connected with the resources you need to succeed! <http://sprott.carleton.ca/students/undergraduate/support-services/>  
Be in the know with what’s happening at Sprott: Follow @SprottStudents and find us on Facebook SprottStudents Sprott.

**Important Information:**

- Students must always retain a hard copy of all work that is submitted.
  - All final grades are subject to the Dean’s approval.
  - For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, it would be easier to respond to your inquiries if you would send all email from your Carleton account. If you do not have or have yet to activate this account, you may wish to do so by visiting <http://carleton.ca/ccs/students/>
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