



Carleton
UNIVERSITY

SPROTT
SCHOOL OF BUSINESS

BUSI 3512 C
WINTER 2020
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 SA 417

Pre-requisites & precluded Courses: BUSI 2505 with a grade of C+ or higher, STAT 2606 and ECON 2009 with a grade of C- or higher in each. BUSI3512 precludes additional credit for BUSI 4512 (no longer offered).

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*, 10th ed., Prentice Hall, 2018.

Grading Scheme:

In-class quizzes (Best 3@5%)	15%
Options trading simulation	10%
Mid-term exam 1	20%
Mid-term exam 2	20%
Final exam	35%
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 tests and the final exam will cover both the theory and application of topics covered in classes and the readings. The mid-term tests 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 midterms 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 25-30 minutes in length.

Exam Attendance

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.

COURSE SCHEDULE (TENTATIVE AND SUBJECT TO CHANGES)

Date	Topic	Chapter in Hull
Jan.8	Introduction, Mechanics of Options Markets	1, 10
Jan.15	Properties of Stock Options	11
Jan.22	Trading Strategies Involving Options Quiz 1	12
Jan.29	Binomial Trees	13
Feb.5	The Black-Scholes-Merton Model Quiz 2	15
Feb.12	Midterm 1 (in-class)	
Feb.19	Winter break. No classes.	
Feb.26	Mechanics of Futures and Forward Markets	2
Mar.4	Hedging Strategies Using Futures	3
Mar.11	Determination of Forward and Futures Prices Quiz 4	5
Mar.18	Midterm 2 (in-class)	
Mar.25	Swaps	7
Apr.1	Credit Derivatives (time permitting) Quiz 3	25

ADDITIONAL INFORMATION

Course Sharing Websites

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			

Grades entered by Registrar:
WDN = Withdrawn from the course
DEF = Deferred

Academic Regulations

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 Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the

classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

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 on 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: <https://carleton.ca/registrar/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 are 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/learning-support/>

Centre for Student Academic Support

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: carleton.ca/csas.

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, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>
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