

## 1. Course Information

**Course Number and Section: MOS 3312 A 550**

**Course Name: Derivative Securities Markets**

Course Prerequisites: MOS 3310A/B, and enrolment in BMOS, or Major in Finance, or permission of the instructor/Chair/Dean of MOS.

Antirequisite(s): MOS 4312 A/B.

Class: W 106 (Huron campus)

Instructor Name: Dr. Ramani

E-mail address: [sramani3@uwo.ca](mailto:sramani3@uwo.ca); [sramani3@huron.uwo.ca](mailto:sramani3@huron.uwo.ca)

Scheduled class times: Monday- 8:30 am – 10:30 am, Wed: 8:30 am-9:30 am

Office Hours: Mondays (3:30 – 4:30 pm) or by appointment. Drop in for small questions.

## 2. Course Description

This course studies derivative securities such as Forwards, Futures, Options, and Swaps. Topics include an introduction to the institutions and pricing of derivative securities in commodity, interest rate, and foreign exchange markets, the use of derivative securities for hedging, speculation, and arbitrage, and their role as a stabilizing mechanism in the economy.

## 3. Course Learning Outcomes

By the end of the semester, successful students will be able to:

- explain the fundamentals of options, futures, swaps, and other derivative securities
- explain the general structure of derivative securities markets, price determination, and uses of the derivative securities
- apply derivative securities pricing models to real world data

## 4. Textbooks and Course Materials

- Options, Futures, and Other Derivatives, 11th Edition  
John C. Hull, University of Toronto (*Recommended, but not required*)  
Older editions are fine too.

## 5. Methods of Evaluation

Quizzes -15%

Midterm (2 hours)– 35% (Oct 24<sup>th</sup>)

Class Participation – 5%

Final Examination (3 hours) - 40%

Exams are in Short essay and numerical format and are **closed book**. The midterm exam will be two hours. The final exam will be scheduled for Three hours. **1 sided cheat sheet with font size 10 or 12 allowed for only formulas. No examples allowed. Only non-programmable**

**calculators will be allowed into the exams.** If you are unsure, please ask your professor to check your calculator.

Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the text.

Students are ***REQUIRED TO COMPLETE ALL COMPONENTS*** of this course. There are no exceptions to this. Extra assignments to improve grades ***will NOT*** be allowed.

**Grades will not be adjusted on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.**

## 6. Tentative Class Schedule/ Syllabus

### TOPICS

Date	Week	Topic	Chapter	Deliverable
				Due the Friday of the week
12-Sep	1	Introduction – The Rationale for Risk Management	1	
		Futures Markets and Central Counterparties	2	
19-Sep	2	Hedging Strategies Using Futures	3	
		Interest Rates	4	
26-Sep	3	Interest Rates	4	
		Determination of Forward and Futures Prices	5	Assignment 1 due
03-Oct	4	Determination of Forward and Futures Prices	5	
		Swaps – Introduction and Mechanics	7	Assignment 2 due
10-Oct	5	<b>Thanksgiving – No Class</b>		
		Swaps - Valuation	7	
17-Oct	6	Securitization and Credit Crisis	8	Assignment 3 due
		Mechanics of Options Markets	9	
24-Oct	7	<b>MIDTERM (Oct -24th)</b>		
		Value at Risk (VaR) – Spreadsheet Assignment	20	
31-Oct	8	<b>Reading Week</b>		
07-Nov	9	Mechanics of Options Markets	9	
		Properties of Stock Options	10	Assignment 4 due
14-Nov	10	Properties of Stock Options	10	
		Trading Strategies Involving Options	11	
21-Nov	11	Trading Strategies Involving Options	11	
		Introduction to Binomial Trees	12	Assignment 5 due
28-Nov	12	Introduction to Binomial Trees	12	

		Valuing Stock Options: The Black-Scholes-Merton Model	13	
05-Dec	13	The Greek Letters	17	
		Employee Stock Option / Final review	14	Assignment 6 due

## 15. E-mail Policies

The following policies apply to all emails between students and the Professor. Please respect the fact that the Professor receives hundreds of emails from students and must deal with those emails in a fair and organized manner. Unacceptable emails will receive a reply saying only “Please see Email Policies on the course outline”.

### 15.1 UWO.CA Email Addresses Only

For privacy reasons, students must use their Western email accounts to contact the Professor. The Professor will not respond to emails from non-uwo.ca addresses (e.g. hotmail.com, gmail.com, etc.).

### 15.2 Subject Line Must Include Course and Section Number

The subject line of emails must contain the name or number of the course, and the section number in which the student is enrolled. The Professor teaches different courses and sections and cannot properly respond to questions if he does not know which course or section you are enrolled in.

### 15.3 Acceptable Emails

- questions about the course content or materials
- asking to set up an appointment to ask questions or review an exam
- notification of illness or other special circumstances
- providing constructive comments or feedback about the course

### 15.4 Unacceptable Emails

- questions that may be answered on OWL or on this course outline
- asking when grades will be posted
- asking what grade a student received
- asking where or when an exam is scheduled or the material covered on an exam
- requests for grade increases, extra assignments, or reweighting of course components

## FREQUENTLY ASKED QUESTIONS

**Question**  
How can I succeed in this course?

I missed the quiz because my computer didn't work, my internet connection was lost, I was preparing my Business 2257 project, I was out of town, I lost my phone, I forgot ...

I missed a quiz or exam because I was sick or there was a death in my family.

I have a lot of mid-terms or projects at once. Can I write the make-up exam?

## Answer

Do all the assigned readings, attend class, focus on understanding the principles in a way that lets you apply them to new fact situations.

A missed quiz will result in a mark of zero. You are responsible for calendaring the quizzes and having reliable internet access to write them. There are no “make up” assignments available.

See the section of the course outline on ILLNESS AND SPECIAL CIRCUMSTANCES

Make-up exams for conflicts are not available unless you meet the Exam Conflict or Multiple Exam Situation scenarios. See website for instructions.

When will the exam grades be posted?

Mid-term grades are posted on OWL when they become available. Final exam grades and final course grades are not posted on OWL.

Can I come and see my exam?

You can review your exam during office hours or at any other mutually convenient time.

Can I use a different textbook?

You can use a different textbook, but it is your responsibility to ensure that you are learning all of the assigned material. Be aware that different textbooks may be organized differently and may cover different material. You do not need to remember everything in the book. You need to understand the fundamental principles and how to apply them.

There is so much material. How can I possibly remember everything?

You do not need to remember everything in the book. You need to understand the fundamental principles and how to apply them.

This mark is going to prevent me from getting accepted at Ivey/graduate school/NASA.

Grades are given based on actual performance, as set out on the course outline. In order to be fair to all the students in the course, grade adjustments, extra assignments, and the reweighting of course components are not available.

I need a certain mark to get or maintain a scholarship  
I tried really hard but I still got a poor mark.  
This is the lowest mark I have ever received.



## **Appendix to Course Outlines: Academic Policies & Regulations Fall/Winter 2022**

### **Pandemic Contingency**

Huron will continue to follow the guidance of public health and government officials. It is anticipated that there will be no further disruptions to in-person instruction. This is subject to change.

### **Student Code of Conduct**

Membership in the community of Huron University College and Western University implies acceptance by every student of the principle of respect for the rights, responsibilities, dignity and well-being of others and a readiness to support an environment conducive to the intellectual and personal growth of all who study, work and live within it. Upon registration, students assume the responsibilities that such registration entails. While in the physical or online classroom, students are expected to behave in a manner that supports the learning environment of others. Please review the Student Code of Conduct at: <https://huronatwestern.ca/sites/default/files/Res%20Life/Student%20Code%20of%20Conduct%20-%20Revised%20September%202019.pdf>.

### **Prerequisite and Antirequisite Information**

Students are responsible for ensuring that they have successfully completed all course prerequisites and that they have not completed any course antirequisites. Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

### **Attendance Regulations for Examinations**

A student is entitled to be examined in courses in which registration is maintained, subject to the following limitations:

- 1) A student may be debarred from writing the final examination for failure to maintain satisfactory academic standing throughout the year.
- 2) Any student who, in the opinion of the instructor, is absent too frequently from class or laboratory periods in any course will be reported to the Dean of the Faculty offering the course (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Dean of that Faculty, the student will be debarred from taking the regular examination in the course. The Dean of the Faculty offering the course will communicate that decision to the Dean of the Faculty of registration.

Review the policy on Attendance Regulations for Examinations here: [Academic Calendar - Western University \(uwo.ca\)](#)

### **Statement on Academic Offences**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following website: [Academic Calendar - Western University \(uwo.ca\)](#). The appeals process is also outlined in this policy as well as more generally at the following website:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/appealsundergrad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/appealsundergrad.pdf).

### **Turnitin.com**

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

### **Statement on Use of Electronic Devices**

It is not appropriate to use electronic devices (such as, but not limited to, laptops, tablets, cell phones) in the classroom for non-classroom activities. Such activity is disruptive and distracting to other students and to the instructor, and can inhibit learning. Students are expected to respect the classroom environment and to refrain from inappropriate use of technology and other electronic devices in class.

### **Statement on Use of Personal Response Systems (“Clickers”)**

Personal Response Systems (“clickers”) may be used in some classes. If clickers are to be used in a class, it is the responsibility of the student to ensure that the device is activated and functional. Students must see their instructor if they have any concerns about whether the clicker is malfunctioning. Students must use only their own clicker. If clicker records are used to compute a portion of the course grade:

- the use of somebody else’s clicker in class constitutes a scholastic offence
- the possession of a clicker belonging to another student will be interpreted as an attempt to commit a scholastic offence.

## **Academic Consideration for Missed Work**

All students pursuing academic consideration, regardless of type, must contact their instructors no less than 24 hours following the end of the period of absence to clarify how they will be expected to fulfill the academic responsibilities missed during their absence. **Students are reminded that they should consider carefully the implications of postponing tests or midterm exams or delaying submission of work, and are encouraged to make appropriate decisions based on their specific circumstances.**

Students who have conditions for which academic accommodation is appropriate, such as disabilities or ongoing or chronic health conditions, should work with Accessible Education Services to determine appropriate forms of accommodation. Further details concerning policies and procedures may be found at: <http://academicsupport.uwo.ca/>.

## **Policy on Academic Consideration for a Medical/ Non-Medical Absence**

### **(a) Consideration on Medical Grounds for assignments worth *less than 10%* of final grade: Consult Instructor Directly and Contact Academic Advising**

When seeking consideration on **medical grounds** for assignments worth *less than 10%* of the final course grade, the student should contact the instructor directly. The student need only share broad outlines of the medical situation. The instructor **may** require the student to submit documentation to the academic advisors, in which case she or he will advise the student and inform the academic advisors to expect documentation. If documentation is requested, the student will need to complete and submit the [Student Medical Certificate](#). The instructor may **not** collect medical documentation. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation.

### **b) Medical Grounds for assignments worth 10% or more of final grade: Go Directly to Academic Advising**

University Senate policy, which can be found at [Academic Calendar - Western University \(uwo.ca\)](#) requires that all student requests for accommodation on medical grounds for assignments worth 10% or more of the final grade be made directly to the academic advising office of the home faculty (for Huron students, the “home faculty” is Huron), with supporting documentation in the form (minimally) of the Senate-approved Student Medical Certificate found at: [https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf).

The documentation is submitted in confidence and will not be shown to instructors. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation. The instructor will not normally deny accommodation

where appropriate medical documentation is in place and where the duration it describes aligns with the due date(s) of assignment(s). Before denying a request for accommodation on medical grounds, the instructor will consult with the Dean. The instructor's decision is appealable to the Dean.

**c) Consideration on Non-Medical Grounds: Consult Huron Support Services/Academic Advising, or email [huronsss@uwo.ca](mailto:huronsss@uwo.ca).**

Students seeking academic consideration for a **non-medical** absence (e.g. varsity sports, religious, compassionate, or bereavement) will be required to provide appropriate documentation. All consideration requests must include a completed [Consideration Request Form](#). Late penalties may apply at the discretion of the instructor.

Please review the full policy on Academic Consideration for medical and non-medical absence at: [accommodation\\_medical.pdf \(uwo.ca\)](#). Consult [Huron Academic Advising](#) at [huronsss@uwo.ca](mailto:huronsss@uwo.ca) for any further questions or information.

### **Support Services**

For advice on course selections, degree requirements, and for assistance with requests for medical accommodation, students should email an Academic Advisor in Huron's Student Support Services at [huronsss@uwo.ca](mailto:huronsss@uwo.ca). An outline of the range of services offered is found on the Huron website at: <https://huronatwestern.ca/student-life/student-services/>.

Department Chairs, Program Directors and Coordinators are also able to answer questions about individual programs. Contact information can be found on the Huron website at: <https://huronatwestern.ca/contact/faculty-staff-directory/>.

If you think that you are too far behind to catch up or that your workload is not manageable, you should consult your Academic Advisor. If you are considering reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines. Please refer to the Advising website, <https://huronatwestern.ca/student-life/student-services/academic-advising/> or review the list of official Sessional Dates on the Academic Calendar, available here: <http://www.westerncalendar.uwo.ca/SessionalDates.cfm>.

You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. Note that dropping a course may affect OSAP and/or Scholarship/Bursary eligibility.

Huron Student Support Services: <https://huronatwestern.ca/student-life/student-services/>

Office of the Registrar: <https://registrar.uwo.ca/>

Student Quick Reference Guide: <https://huronatwestern.ca/student-life/student-services/#1>

Academic Support & Engagement: <http://academicsupport.uwo.ca/>

Huron University College Student Council: <https://huronatwestern.ca/student-life/beyond-classroom/hucsc/>

Western USC: <http://westernusc.ca/your-services/#studentservices>

### **Wellness and Health Supports at Huron and Western**

University students may encounter setbacks from time to time that can impact academic performance. Huron offers a variety of services that are here to support your success and wellbeing. All Huron staff and

faculty have received training on responding to disclosures of Gender-Based Sexual Violence (GBSV); students should know that the Community Safety Office is a resource for survivors, providing support and, if desired, guidance while referring them to the further supports that they may require. Please visit <https://huronatwestern.ca/student-life-campus/student-services/wellness-safety> for more information or contact staff directly:

Wellness Services: [huronwellness@huron.uwo.ca](mailto:huronwellness@huron.uwo.ca)

Community Safety Office: [safety@huron.uwo.ca](mailto:safety@huron.uwo.ca)

Additional supports for Health and Wellness may be found and accessed at Western through, <https://www.uwo.ca/health/>.

Western Calendar - Policy Pages -

[Academic Calendar - Western University \(uwo.ca\)](#)