



Rotman Commerce UNIVERSITY OF TORONTO

Course Outline

RSM 435 H1 F

Futures and Options

Fall 2018

Course Meets: L0101 Tuesday 1-3pm in OI4422; L0201 Tuesday 4-6pm OI5250; L0301
Wednesday 3-5pm OI4420; L5101 Wednesday 6-8pm OI4422

Instructor: Professor Alexandra MacKay, RT453

E-Mail: amackay@rotman.utoronto.ca

Phone: 416.978.0740

Office Hours: Thursdays, 10am-12pm, RT453

EXCEPTIONS – there will be NO office hours on November 22nd, and
office hours on December 6th will be from 1-3pm

Teaching Assistant: stay tuned for more information

Course Scope and Mission

This course concerns itself with the analysis of financial derivative securities such as forwards, futures, swaps and options. Students will become well informed regarding how these contracts work, how they are used and how they are priced.

There will be an emphasis on applied learning for this course. To that end, much of the lecture content for the course is made available to you in the form of short videos which you are expected to watch ahead of class. There are short 'learning check' quizzes you can try that accompany most of the videos. In turn, this will mean we can devote a large portion of class time to applications of the concepts. We will solve problems, trade derivatives, and discuss issues related to financial derivatives.

Students will develop skills to communicate their knowledge of financial derivatives. This will include contributing to discussion in class, producing video answers to questions and creating clear written reports. Arguably, the ability to communicate knowledge is as essential as the knowledge itself.

Course Prerequisites

Prerequisite: ECO204Y1/ECO206Y1 and RSM332H1

Exclusion: ACT370H1

Required Readings

Hull, John C., Options, Futures, and Other Derivatives, 10th Edition, Pearson-Prentice Hall, 2018

Hull, John C., Student Solutions Manual for Options, Futures, and Other Derivatives, 10th Edition, Pearson-Prentice Hall, 2018

Required Software License

Each student in RSM435 is required to have an individual license to the Rotman Portfolio Manager (RPM) software. The cost is \$35.00. This was charged as an ancillary fee when you registered for the course. (In other words, you have already purchased the license.) The second class will be held in the BMO Financial Markets Finance and Research Lab. You will be informed regarding how to set up your individual RPM account during that class.

Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

<u>Work</u>		<u>Due Date</u>
Personal Pitches	4%	Sep 16 and Dec 9
Video Quizzes	10%	Sep 30, Oct 14, Oct 28, Nov 18, Dec 2
Weekly Questions	9%	every non-Lab class; first 10 minutes of class
RPM Project	10%	Oct 28 and Dec 9
RIT Decision Reports	6%	Oct 21 and Nov 18
Survey	2%	Sep 23
Machine Learning Project	9%	Nov 25
Final Examination	50%	During the Arts & Science exam period

COURSE FORMAT AND EXPECTATIONS

Normally students will be required to submit their written course submissions to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the university's use of the Turnitin.com service are described on the Turnitin.com website.

Please note that clear, concise, and correct writing will be considered in the evaluation of Weekly Questions, RIT Decision Reports, RPM Reports and the Machine Learning Project. That is, you may lose points for writing that impedes communication: poor organization, weak paragraph development, excessive wordiness, hard-to-follow sentence structure, spelling mistakes and grammatical errors. Students who require additional support and/or tutoring with respect to their writing skills are encouraged to visit the Academic Success Centre (<http://www.studentlife.utoronto.ca/asc>) or one of the College Writing Centres (www.writing.utoronto.ca/writing-centres). These centres are teaching facilities – not editing services, where trained staff can assist students in developing their academic writing skills. There is no charge for the instruction and support.

The Machine Learning Project requires students to work in teams of no more than 4 people. Learning to work together in teams is an important aspect of your education and preparation for your future careers. That said, project-based teamwork is often new to students; to work well in teams, it helps to follow a set of core expectations to best succeed at your team projects.

1. Read the document entitled, "Working in Teams: Guidelines for Rotman Commerce Students" which is available on the RC portal under the Academic Services tab.
2. When working in a team, Rotman Commerce students are expected to:
 - Treat other members with courtesy and respect;
 - Honour the ground rules established by the team;
 - Contribute substantially and proportionally to the final project;
 - Ensure enough familiarity with the entire contents of the group project/assignment so as to be able to sign off on it as original work;
 - Meet the project timeline as established by the team.

3. Resolving conflicts:

Conflicts are part of the team's process of learning how to work together. When handled well, it can generate creativity and bring-multiple perspectives to the solution.

Student teams are expected to work through their misunderstandings as soon as they arise (and prior to submission of the final project). When teams are unable to arrive at a solution that works for all members, the team must meet with the Rotman Commerce Team Coach** as soon as possible. The Coach will listen to the team and help develop options for improving the team process. All members of the project team must commit to, and, utilize their action plans.

**For an appointment with a Rotman Commerce Team Coach, please contact Nouman Ashraf at nouman.ashraf@rotman.utoronto.ca. Nouman is highly skilled at facilitating team dynamics and collaboration. Note that the Team Coach's role is to provide guidance, support and advice on team matters – not to formally evaluate or assess teamwork for academic purposes.

Communicado Platform:

The Mind-Brain Hive within the Desautels Centre for Integrative Thinking has created a new platform – Communicado – that we will be piloting in RSM435. This platform allows students to submit recorded videos to posed questions. The platform produces a written transcript of the video recording, and allows the grader to provide time-stamped comments on the submission. The student will receive the comments, the transcript and his/her grade. The student will be able to download the video s/he submitted to review.

We will be using the brand new Communicado platform for assignments that require a video submission in RSM435. Please be sure to use the Chrome browser to access Communicado. Watch for an email from rotmanapps@gmail.com with the Subject Line 'Rotman Commerce Polling Account Activation'. You do not need to register or create an account. An individual account has been created with your name and email. When you receive the account activation email, all that is required is that you create a password. Then go to <https://rotmancommerce.communicado.ca> and sign in.

If you do not activate your account within 72 hours of receiving the activation email, you will need to request that your password be re-set. You will then need to exit the site and return.

For all assignments using Communicado, begin your video recording by holding your student ID card to your webcam so that the grader viewing your video submission can verify your identity.

For all assignments using Communicado, you are encouraged not to leave it to the last minute.

Personal Pitch Assignment:

There will be two Personal Pitch assignments – one at the beginning of the course and one at the end. Each is worth 2% of your overall grade for the course. These are individual assignments. You are asked to create a 30 second video, using the Communicado platform, to introduce yourself. Details on the requirements for each pitch will be posted on Quercus.

Video Quizzes:

There will be five Video Quiz assignments. Each is worth 2% of your overall grade for the course. These are individual assignments. You will login to the Communicado platform, confirm your camera and microphone are working properly, and then click on the Quiz. You will have a pre-set amount of time to read the question asked of you, and a pre-set amount of time to respond. These time limits are clearly visible in Communicado and are established by the instructor. For each Communicado Quiz, the question will be based on the preceding two weeks of course content. For some Quizzes, you will have the opportunity to attempt the answer more

than once and then to choose which video recording you wish to submit. (The videos you do not submit will be deleted by the system.) You will be graded on the correctness of your response to the question, and based on the clarity and persuasiveness with which you communicate your response.

Weekly Questions:

Each week that class is not held in the Finance Lab, beginning with the first class in the week of September 10th, there will be a question in the first 10 minutes of class. The question will be based on material to be prepared for that class and/or on material discussed in the preceding class. Please bring your laptop or tablet that enables you to log in to Quercus to class each week; these weekly questions will usually be conducted and submitted online. There are nine such classes. The top six scores on the weekly questions will count toward your final grade. They will be graded based on the correctness of your response, and based on the clarity and appropriateness of your written response. These are individual assignments.

If you arrive late for class, you will be allowed whatever time remains for the Question. For example, if you arrive 4 minutes late, you will have 6 minutes. However, if you arrive 11 minutes late, you will miss the opportunity. Do not despair: remember only six of the nine count.

Rotman Portfolio Manager (RPM) Project:

We will be using the RPM software for this course. Part of class during the week of September 17th will be devoted to an introduction to this software. For the RPM project, you will build, monitor and revise a portfolio of derivatives based on your investment strategy using the fictitious capital allocated to you at the beginning of the term. Please refer to detailed guidelines on the RPM project that will be posted on Quercus, and also to the RPM guides. You will submit two reports on your RPM portfolio. The reports will be graded on the logic you used to form and modify your portfolio, what you state you learned, and the clarity with which you write your report. The RPM Project is an individual assignment. In total, the two reports will be worth 10% of your overall grade for the course.

Rotman Interactive Trade (RIT) Decision Reports:

We will be using the RIT software to trade financial derivatives in the BMO Financial Markets Finance Research and Trading Lab. Please refer to the course schedule to identify which weeks the class will be held there rather than the usual classroom. For each such week, please prepare by carefully reading the trading case(s) for that class. Think about how you will wish to trade to accomplish the objective specified in the case(s). Bring a copy (electronic or printed) of the case with you to the Finance Lab. Following the second and third trading sessions in the Finance Lab, you will be asked to submit a Decision Report. These will be worth a total of 6% of your overall grade for the course. Decision Reports will be graded on the basis of sound logic and based on the clarity with which you write your report. The RIT Decision Reports are individual assignments.

Machine Learning Project:

This will be a group project. You will be assigned to a group by the instructor. Group composition will be communicated to you by the end of September. The project will require some minor coding in Python, but Python coding is not the focus of the project. The Project Report will be worth 9% of your overall grade for the course. The Project Report will be graded on the basis of its content and conclusions, as well as on the clarity with which it is written. Each student in the group will receive the same grade.

Preparation for Class Each Week:

Ahead of each class, preparation is required. For classes in the assigned classroom, each student is asked to prepare for class by reading the readings identified on the course schedule below and to watch the video content that supports the same material. Be an attentive video watcher. You can replay the video. You can answer questions that help assess whether you have understood the video content. Class time will be used to work with the concepts from the readings and video. To apply the concepts, you need to have thought about them in advance of class.

For the three classes that are scheduled for the Finance Lab, prepare for class by reading the assigned RIT case and give some careful thought to how you intend to trade.

Weekly Schedule

	Date	Location	Topic	Videos	Reading
1	Sep 11/12	classroom	Introduction Mechanics of Futures Markets Hedging Strategies Using Futures	Yes	Chapters 1, 2 & 3
DUE SEPTEMBER 16: PERSONAL PITCH #1 SEPTEMBER 19: LAST DAY TO ADD A COURSE					
2	Sep 18/19	Finance Lab	Introduction to CBOE, RPM, RIT RIT Case		
DUE SEPTEMBER 23: COMPLETE SURVEY					
3	Sep 25/26	Classroom	Interest Rate Determination of Forward & Futures Prices	Yes	Chapters 4 & 5
DUE SEPTEMBER 30: VIDEO QUIZ #1					
4	Oct 2/3	Classroom	Interest Rate Futures	Yes	Chapter 6
5	Oct 9/10	Classroom	Mechanics of Options Markets Properties of Stock Options Trading Strategies Binomial Option Pricing Model	Yes	Chapters 10, 11, 12 & 13
DUE OCTOBER 14: VIDEO QUIZ #2					
6	Oct 16/17	Finance Lab	RIT Case		
DUE OCTOBER 21: RIT DECISION REPORT from October 16/17					
7	Oct 23/24	Classroom	Binomial Option Pricing Model (con't) Black-Scholes-Merton Model	Yes	Chapter 13, Section 18.6, Chapter 15 (excluding section 15.6)
DUE OCTOBER 28: VIDEO QUIZ #3 DUE OCTOBER 28: RPM REPORT PART #1					
8	Oct 30/31	Classroom	Black-Scholes-Merton Model The Greeks	Yes	Chapters 15 (excluding section 15.6) and 19
NOVEMBER 5: LAST DAY TO DROP A COURSE NOVEMBER 5-9: READING WEEK					
9	Nov 13/14	Finance Lab	RIT Case		
DUE NOVEMBER 18: VIDEO QUIZ #4 DUE NOVEMBER 18: RIT DECISION REPORT from November 13/14					
10	Nov 20/21	Classroom	Options on Stock Indices, Currencies & Futures	Yes	Chapters 17 & 18
DUE NOVEMBER 25: MACHINE LEARNING PROJECT GROUP REPORT					
11	Nov 27/28	Classroom	Swaps	Yes	Chapter 7
DUE DECEMBER 2: VIDEO QUIZ #5					
12	Dec 4/5	Classroom	Review & Wrap Up	Yes	
DUE DECEMBER 9: PERSONAL PITCH #2 DUE DECEMBER 9: RPM REPORT PART #2 FINAL EXAMINATION: DURING ARTS & SCIENCE EXAM PERIOD DEC 8-21					

POLICY AND PROCEDURE

Missed Tests and Assignments

Students who miss a quiz, test, assignment or other deliverable for reasons entirely beyond their control (e.g. illness) may submit a request for special consideration. Provided that notification and documentation are provided in a timely manner, and that the request is subsequently approved, no academic penalty will be applied.

In such cases, students must notify Rotman Commerce on the date of the missed test (or due date in the case of course work) and submit supporting documentation (e.g. [Verification of Student Illness or Injury form](#)) to the Rotman Commerce Program Office within **2 business days** of the originally scheduled test or due date. Students who do not provide Rotman Commerce or the instructor with appropriate or sufficient supporting documentation will be given a grade of 0 (zero) for the missed test or course deliverable.

Documentation submitted in support of petitions for missing tests and assignments must be original; no faxed or scanned copies will be accepted.

Note that the physician's report must establish that the patient was examined and diagnosed at the time of illness, not after the fact. Rotman Commerce will not accept a statement that merely confirms a later report of illness made by the student to a physician.

Personal Pitches:

If you miss the deadline for submission of the first Personal Pitch (subject to appropriate verified documentation submitted to the Commerce Office), please contact the instructor no later than 9am on September 20th. If you miss the deadline for submission of the second Personal Pitch (subject to appropriate verified documentation submitted to the Commerce Office), the weight of the missed Pitch will be added to the weight for the Final Examination.

Weekly Questions:

There will be nine Weekly Questions – one at the beginning of each weekly class that is not held in the Finance Lab. The best six of these will count. Therefore, if you miss up to three of them (subject to appropriate verified documentation submitted to the Commerce Office), the remaining best six of eight, best six of seven, or all six, will count. If you miss four or more, the weight of the missed Weekly Question(s) will be added to the weight for the Final Examination.

Video Quizzes:

There will be five Video Quizzes created and submitted via the Communicado platform. If you miss one or more (subject to appropriate verified documentation submitted to the Commerce Office), the weight of the missed Video Quiz (or quizzes) will be added to the weight for the Final Examination.

RPM Reports:

If you are unable to meet the deadline for the submission of the RPM Part 1 report (subject to appropriate verified documentation submitted to the Commerce Office), the weight will be added to the weight for the RPM Part 2 report. If you are unable to meet the deadline for the submission of the RPM Part 2 report (subject to appropriate verified documentation submitted to the Commerce Office), the weight will be added to the Final Examination.

RIT Decision Reports:

If you are unable to meet the deadline for submission for the first RIT Decision Report (due October 21st), the grade will be shifted to the second RIT Decision Report (due November 18th). This is subject to appropriate verified documentation submitted to the Commerce Office) If you

miss the deadline for submission for the second RIT Decision Report (November 18th), the weight of the missed Decision Report will be added to the weight for the Final Examination in the calculation of your final grade.

Late Assignments

Students who, for reasons beyond their control, are unable to submit an assignment by its deadline must obtain approval from the instructor for an extension. Supporting documentation will be required as per the policy on missed tests and assignments.

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible:

accessibility.services@utoronto.ca or <http://www.studentlife.utoronto.ca/as>.

Academic Integrity

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the UofT degree that you earn will continue to be valued and respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously.

The University of Toronto's Code of Behaviour on Academic Matters

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> outlines the behaviours that constitute academic misconduct, the process for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes collaborating with others on assignments that are supposed to be completed individually).

On test and exams:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to), medical notes.

All suspected cases of academic dishonesty will be investigated by the following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have any question about what is or is not permitted in the course, please do not hesitate to contact the course instructor. If you have any questions about appropriate research and citation methods, you are expected to seek out additional information from the instructor or other UofT resources such as College Writing Centres or the Academic Success Centre.

Email

At times, the course instructor may decide to communicate important course information by email. As such, all UofT students are required to have a valid UTmail+ email address. You are responsible for ensuring that your UTmail+ email address is set up AND properly entered on the ROSI system. For more information please visit <http://help.ic.utoronto.ca/category/3/utmail.html>

Forwarding your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that important messages from your course instructor may end up in your spam or junk mail folder.

Quercus and the Course Page

The online course page for this course is accessed through Quercus. To access the course page, go to q.utoronto.ca and log in using your UTORid and password. Once you have logged in, you will be at the Quercus Dashboard. On this page you will see all of the courses you are presently enrolled in. If you do not see the course listed here but you are properly registered for the course in ROSI, wait 48 hours.

Recording Lectures

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. Students wishing to record a lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted (note: students who have been previously granted permission to record lectures as an accommodation for a disability are, of course, excepted). This includes tape recording, filming, photographing PowerPoint slides, Quercus materials, etc.

If permission is granted by the instructor (or via Accessibility Services), it is intended for the individual student's own study purposes and does not include permission to "publish" them in any way. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.

Pre-Recorded Video Content

This course will make use of substantial pre-recorded video content. You are not permitted to download this video content or to share it or post it. Its only allowed use is within the confines of this course this term.