Rotman Commerce
UNIVERSITY OF TORONTO

Course Outline

RSM434H1S
Financial Trading Strategies
Winter 2019

Course Meets:

L0101 Mondays	9am – 11am	Finance Lab
L0201 Mondays	11am – 1pm	Finance Lab
L0301 Mondays	1pm – 3pm	Finance Lab
L2301 Mondays	1pm – 3pm	Finance Lab

Instructor: Craig Geoffrey (Section: L0201, L0301, L2301)
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Office Hours: TBD

Teaching Assistant: TBD
TBD

Course Scope and Mission

The purpose of this course is to familiarize students with how financial markets function and how to analyze different types of risks and opportunities associated with financial trading strategies. Specifically, students will be required to build financial models using simulation tools such as the Rotman Interactive Trader and Rotman Portfolio Manager to help them make decisions when faced with uncertainty.

The main objectives of the course will include but will not be limited to:

1. Introduction to Market Microstructure
   Students will develop a fundamental understanding of the roles of market makers, agency traders and liability traders, and will be able to analyze the risks and the opportunities involved with each role

2. Introduction to Commodities Markets
   Students will be introduced to the unique market dynamics of commodities trading and develop trading strategies by identifying mispricing opportunities and analyzing profitability across different opportunities
3. Introduction to Algorithmic Trading
   Students will learn to develop algorithms that automatically follow trading instructions to capture various profit opportunities while managing their positions and order flow to avoid taking unnecessary risks

Students will constantly be asked to apply their critical thinking to analyze the problems presented using the Rotman Interactive Trader cases. They will also be required to translate their thinking into financial models that will support them in making real-time decisions.

Rotman Interactive Trader
The Rotman Interactive Trader is a market-simulator that provides students with a hands-on approach to learning finance. It allows students to practice decision making under uncertainty in a controlled environment where they can immediately observe the outcomes of their decisions. By being able to analyze the consequences of their decisions in different situations, students are able to learn how to make good decisions when the future is uncertain. More information can be found at http://rit.rotman.utoronto.ca.

Rotman Portfolio Manager
Rotman Portfolio Manager (RPM) exercises will be assigned to apply your strategies to real-time quotes for actual securities. This facilitates learning about important institutional details and reinforces the learning objectives of the RIT cases. You will be able to install the RPM client and connect to the RPM server from any computer with a web connection. More information can be found at http://rpm.rotman.utoronto.ca.

Course Prerequisite: RSM332H1
Course Exclusions: RSM412H1 – Financial Trading Strategies

Required Readings
There is no textbook for this course. Slides, RIT Case Briefs, Excel support templates, help files, and any other materials will be posted on the course webpage. It is required that students read the case studies prior to attending each class.

An RPM subscription is required and can be purchased at http://rpm.rotman.utoronto.ca.

Optional Readings
Optional Readings will be posted on the course webpage and will be noted as *optional*. Any reading that is not noted as *Optional* should be considered as required.

Group Assignment:
The Group Assignment involves learning how to use a programming language (such as Excel VBA or Python) to develop an algorithm to implement a particular trading strategy.

RIT Performance Evaluations:
Your scores will be based on your average rank across several replications of the RIT cases.

RPM Exercises:
These short exercises will show you how to apply the lessons we learn from simulation to real-time quotes for actual securities. RPM exercises are due (i.e. all tasks must be completed) prior to the close of trading (4pm) on the Monday they are due.

Final Test:
Q&A and discussions during the classes will be excellent preparation for the questions on the tests.

Weekly Schedule

Class Date	Topic	Cases	Due
Jan 7	Course Introduction, RIT and RPM Tutorial	Course overview, RIT and RPM guides and videos	
Jan 14	Institutional Agency Trading (order completion) and Liquidity Risk	AT1 and AT2	
Jan 21	Institutional Liability Trading (PnL generation) and Liquidity Risk	LT2 and LT3	RPM AT
Jan 28	Algorithmic Trading; Cross-Listed Arbitrage	**LT3 Evaluation;** ALGO1	RPM LT
Feb 4	Price Discovery in Equity Markets	PD0/PD2; COM1	
Feb 11	Price Discovery with Uncertainty	**ALGO1 Evaluation**; PD3	RPM PD
Feb 18		Reading Week - No Class	
Feb 25	Commodities Trading: contango	**PD3 Evaluation**; F2	
Mar 4	Commodities Trading: transportation arbitrage	**ALGO2 Initial Run**; COM3	
Mar 11	Commodities Capstone	COM5	RPM COM
Mar 18	Performance Evaluation	**COM5 Evaluation**	
Mar 25	Performance Evaluation	**PD3 ALGO Evaluation; ALGO2 Evaluation**	
Apr 1		Final Test (TBD)	

Due to the continuous development of new cases, the above schedule is subject to change and students will be given a one-week notice if the case sequence changes.

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.

Work	Grade	Due Date
RPM Exercises (4 x 5 marks)	20 marks	Throughout the term, graded video questions on online platform
RIT Performance Evaluations	45 marks	**LT3** (Jan 28) – 10 marks **ALGO1** (Feb 11) – 5 marks **PD3** (Feb 25) – 10 marks **COM5** (Mar 18) – 10 marks **PD3 ALGO** (Mar 25) – 10 marks
RIT ALGO2 Group Assignment	15 marks	**ALGO2** Initial Run (Mar 4) – 2 marks **ALGO2** Feedback Session (TBD) – 3 marks **ALGO2** Performance Evaluation (Mar 25) – 10 marks
Final Test	20 marks	April 1st time and place TBD

COURSE FORMAT AND EXPECTATIONS

RPM Exercises

There are 4 exercises to be completed in the Rotman Portfolio Manager. Each exercise is worth 5 marks. Students are to follow the instructions given for each RPM exercise and must complete the assigned activities by the assigned deadline.

For each assignment, students must complete a brief video assignment that must be completed on the Communicado online platform. Grades are assigned based on the sophistication of the insights in the video assignment and the clarity of your explanation, with deductions for incomplete execution of the assigned trades.

After completing all of the assigned tasks for each RPM Assignment, you will login into the Communicado platform and answer the question posed. The question will relate directly to the tasks assigned in each RPM exercise, including the trades executed and the thought process surrounding your trading decision(s). 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.

For each RPM exercise you will be allowed a varying number of attempts, from which you can select which video to submit. For the 1st RPM exercise you will be allowed 4 attempts, for the 2nd RPM exercise you will be allowed 3 attempts, for the 3rd RPM exercise you will be allowed 2 attempts, and for the 4th RPM exercise you will be allowed 1 attempt.

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 RSM434. 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 the RPM assignments in RSM434. 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 RPM 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 RPM assignments using Communicado, you are encouraged not to leave it to the last minute.

ALGO2 Group Assignment

For the ALGO assignment you can work individually or in a group of 2 people. The ALGO assignment has 3 deliverables and totals 15 marks:

ALGO2 Initial Run (2 marks) – a version of your algorithm must be run in class on March 4th. Your P&L is not evaluated – students earn full marks if the algorithm successfully executes multiple passive orders on both the buy and sell side of the market.

ALGO2 Feedback Session (3 marks) – students must attend one of the Feedback Sessions scheduled during the term. During the Session the student algos will be run against those of other participants to gauge performance in a classroom environment (i.e. when many algos are running simultaneously). TAs will be in attendance to aid students with code.

ALGO 2 Performance Evaluation (10 marks) – the final version of your algorithm will run in-class on March 25th. Grading will be according to the performance evaluation rubric (10 marks).

Performance Evaluations

Four RIT cases will be used for evaluation (see the evaluation schedule above). On the selected day, each RIT case will be run multiple times, with average student performance over the multiple runs used to determine student grades (see the performance evaluation rubrics). Each RIT case used for evaluation is covered in-class prior to the performance evaluation, and the RIT servers will be running practice loops for each case to allow students to prepare for the performance evaluation. Each RIT case is worth either 5 or 10 marks.

Final Test

The Final Test will be held on April 1st, time and place TBD. The Final Test is a written test that will cover the major concepts covered during the term. The final test is 2 hours in length and is worth 20 marks.

For All Submissions:

Please note that clear, concise, and correct communication will be considered in the evaluation of your work in the RPM Video assignments. That is, you may lose points for: poor organization, weak argument development, excessive wordiness, hard-to-follow sentence structure, and grammatical errors. Students who require additional support and/or tutoring with respect to their communication 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.

For ALGO2 Group Assignment:

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.

Electronic Course Materials
This course will be using the following electronic course materials:

Rotman Interactive Trader (RIT)
Rotman Portfolio Manager (RPM)

RIT is offered at a university-level on-site license so students are not required to make any purchase. RPM will cost a total of $35.00 + HST per student. The use of these materials complies with all University of Toronto policies which govern fees for course materials.

POLICY AND PROCEDURE

Missed Tests and Assignments (including midterm examinations)
Students who miss a test or assignment 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 **48 hours** 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 report of illness made by the student and documented by the physician.

If the Rotman Commerce Office grants permission for special consideration, the instructor will reallocate the missed mark to the final test.

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.accessibility.utoronto.ca/.

Academic Integrity
Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectively, 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 don't 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 anyway. 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.