Course Outline

Course Code	RSM434 H1F
Course Name	Financial Trading Strategies
Term, Year	Fall, 2023
Course Meets	L0101: 9am-11am, Mondays
	L0201: 11am-1pm, Mondays
Web page URL	https://q.utoronto.ca

Instructor Details

Name	Email	Phone	Office Hours
Eric Kang	eric.kang@rotman.utoronto.ca	416-978-0414	TBA on Quercus

Course Scope, Mission and Learning Outcomes

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 to help them make decisions when faced with uncertainty. This is a learn-by-doing course where students will develop their understanding experientially via trial-and-error as they will be required to actively participate in the learning process each class.

The competitive nature of markets distills the decision-making process down to a series of tradeoffs that balance liquidity, time, and risk. By experiencing these tradeoffs in a simulated market, students will gain a better sense of the constraints imposed by liquidity, the relationship between time and uncertainty, and the necessity of identifying and taking on risk.

These tradeoffs will be explored through topic coverage that broadly falls under the market microstructure branch of finance, with potential supporting case material from the M&A and investing fields.

We will start off by looking at market structure through the eyes of Agency and Liability traders to introduce the mechanics of trading and fundamental issues when trading in markets (liquidity, risk, behaviour) and then progress to (arguably) the most important function of a market, price discovery (how prices are formed by impounding information). Students will develop a solid background that can be applied to specific types of trading strategies (arbitrage, private information, market-making, hedging, volatility trading) both manually and through the creation of algorithmic trading programs.

The learning outcomes can be summarized as follows:

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 Price Discovery**
   Students will discover how prices are formed by market participants incorporating public and private information into their trading decisions, and how to incorporate information in market prices in their own decision-making process.

3. **Introduction to Algorithmic Trading**
   Students will learn to design and write algorithms that automatically follow pre-defined trading instructions to capture various profit opportunities (such as arbitrage, market-making, etc.) while managing their positions and order flow to avoid taking unnecessary risks.

4. **Introduction to Application of Derivatives**
   Students will also explore basic applications of derivatives (options) to identify and manage certain risk exposures and to create speculative positions to trade volatility while managing various types of 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 (RIT)

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.

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

Course Materials

Required Readings
There is no textbook for this course. Slides, videos, RIT Case Briefs, Excel support templates, Python examples, 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.

Evaluation and Grades
Grades are a measure of the knowledge and skills developed by a student within individual courses. Each student will receive a grade on the basis of how well they have command of the course materials, skills and learning objectives of the course.

Work	Percentage of grade	Due Date
Video Assignments	24% (6% each x 4 cases)	LT3 (Oct 6) PD3 (Nov 3) H2 (Nov 17) OP3 (Nov 24)
Performance Evaluations (Practice Runs)	8% (2% each x 4 cases)	LT3 (Oct 2) PD3 (Oct 30) ALGO2e, ALGO4 (Nov 27)

Performance Evaluations	40% (10% each x 4 cases)	Individual: LT3, PD3 (Dec 4) Group: ALGO2e, ALGO4 (Dec 7)
Written Assignments (Group)	12% (6% each x 2 submissions)	Initial Pitch (Nov 3) Final Pitch (Dec 7)
Midterm Test	16%	Oct 30

Course Format and Expectations

Video Assignments

There will be four video assignments that you will need to complete. The video assignments will be completed on Communicado (instructions will be posted on Quercus). Each video is worth 6 marks, covers a different topic, and will be a maximum of 60 seconds in length. Please note that this is an <u>individual</u> assignment. A 1-mark deduction will be applied for each day late.

RIT Performance Evaluations

Given the experiential-learning based nature of the course, you will be graded on your performance in the following four cases. More detailed performance evaluation documents will be posted on Quercus. Each Performance Evaluation is worth 10 marks, and each practice run is worth 2 marks. <u>LT3 and PD3 will be evaluated on an individual basis, and ALGO2e and ALGO4 will be evaluated on a group basis.</u>

Written Assignments

You will be required to provide an initial pitch and a final pitch for <u>either</u> of the ALGO2e or ALGO4 cases. Detailed instructions will be posted on Quercus, and each pitch (written assignment) will be worth 6 marks and a 1-mark deduction will be applied for each day late.

Midterm Test

There will be an in-class midterm test. The test will be worth 16% and there will be no make-up midterm test. More detailed information will be provided on Quercus.

Writing Assignments or Presentations

Video and written assignments intended to help you develop your communication skills. How well you communicate your ideas, in writing or orally, will be considered in the evaluation of the assignment. In your written assignments, you should aim for clarity, strong organization, concision, professionalism, and correct grammar. Your presentations should reflect strong planning and organization, clarity of speech, and an engaging demeanour. Sources, whether in written or presentation assignments, should always be correctly attributed.

Support is available through the RC Centre for Professional Skills (CPS) for students who would like help or feedback on their writing or speaking (presentations). CPS offers both individual and group appointments with trained writing instructors and presentation coaches who are familiar with the RC program and common types of business assignments. You can also access your college Writing Centres for help with written assignments.

You can book an appointment with a writing or presentation coach through the RC Centre for Professional Skills Writing Centre. For more information about writing centres, student supports, and study resources, see the <u>Writing and Presentation Coaching academic support page</u>.

Team or Group Assignments

The algo projects (ALGO2e and ALGO4) <u>allow students to work in teams of 2</u>. Learning to work together in teams is a crucial transferrable skill you will use not only in your coursework, but also in your future careers. Support is available if you encounter common teamwork challenges such as:

- Team members feeling left out of the team.
- Team members not responding in a timely manner to communication.
- Division or quality of work among team members being unequal or unfair.

Consult the Centre for Professional Skills Teamwork Resources page for tips, strategies, and best practices. You can also book an appointment with a teamwork mentor through the RC Centre for Professional Skills Writing Centre. Teamwork mentors can help you resolve or mitigate conflict, strategize on planning, or improve team communication.

If you are a student registered with Accessibility Services, and extensions are one of your academic accommodations, consult with your Accessibility Advisor about the teamwork in this course.

Missed Tests and Assignments (including mid-term and final-term assessments)
Students who miss a test or assignment for reasons entirely beyond their control (e.g. illness) may request special consideration **within 2 business days** of the missed midterm/test/ assignment due date.

In such cases, students must:

1. Complete the Request for Special Consideration form: https://uoft.me/RSMConsideration
2. Provide documentation to support the request, eg. Absence Declaration from ACORN, medical note etc.

Please note: As of September 2023, students may use the Absence Declaration on ACORN *one time per term* to report an absence and request consideration. **Any subsequent absence will require a Verification of Illness form or other similar relevant documentation.**

Students who do not submit their requests and documentation within 2 days may receive a grade of 0 (zero) on the missed course deliverable.

Missed midterm test will have the grade weight distributed evenly to the remaining individual performance evaluations (LT3 and PD3). Missed performance evaluations will result in a grade of 0.

Late Assignments
All assignments are due on the date and at the time specified in Quercus. Late submissions will normally be penalized by 1% if the assignment is not received on the specified date, at the specified time. A further penalty of additional 1% deduction will be applied to each subsequent day until the assignment is received or the allocated grade becomes zero as a result.

Statement on Equity, Diversity and Inclusion
The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Commitment to Accessibility
The University is committed to inclusivity and accessibility, and strives to provide support for, and facilitate the accommodation of, individuals with disabilities so that all may share the same level of access to opportunities and activities offered at the University.

If you require accommodations for a temporary or ongoing disability or health concern, or have any accessibility concerns about the course, the classroom or course materials, please [email Accessibility Services](#) or visit the [Accessibility Services website](#) for more information as soon as possible. Obtaining your accommodation letter may take up to several weeks, so get in touch with them as soon as possible. If you have general questions or concerns about the accessibility of this course, you are encouraged to reach out to your instructor, course coordinator, or Accessibility Services.

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Normally, students will be required to submit their course essays to the University's plagiarism detection tool 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 tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the [University's Plagiarism Detection Tool FAQ](#) page from Centre for Teaching Support & Innovation.

Generative AI / ChatGPT

Students are allowed to make use of technology, including generative artificial intelligence tools, to contribute to their understanding of course materials.

Students may use artificial intelligence tools, including generative AI, in this course as learning aids or to help produce assignments. However, students are ultimately accountable for the work they submit.

Students must submit, as an appendix with their assignments, any content produced by an artificial intelligence tool, and the prompt used to generate the content.

Any content produced by an artificial intelligence tool must be cited appropriately. Many organizations that publish standard citation formats are now providing information on citing generative AI (e.g., MLA: https://style.mla.org/citing-generative-ai/).

Students may choose to use generative artificial intelligence tools as they work through the assignments in this course; this use must be documented in an appendix for each assignment. The documentation should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work.

Academic Integrity

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T 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](#) 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 procedures outlined in the *Code of Behaviour on Academic Matters*. If you have any questions 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 U of T or RC resources such as the RC Centre for Professional Skills, the 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 U of T 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 ACORN. For more information visit the Information Commons Help Desk.

Forwarding your utoronto.ca email to a Gmail or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Gmail 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.

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. Students who have been previously granted permission to record lectures as an accommodation for a disability are excepted. This includes tape recording, filming, photographing PowerPoint slides, Quercus materials, etc.

If permission for recording 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 forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.

Weekly Schedule

Session	Date	Topic	Cases
1	Sept 11	Introduction to the course RIT Tutorial	Course overview RIT guide documents
2	Sept 18	Institutional Trading: order-driven markets and liquidity risk	AT1, LT3
3	Sept 25	Multiple Venues Cross-Listed Arbitrages	LT4, ALGO1
4	Oct 2	Algorithmic Trading using RIT	RIT API Documentation **Practice Run: LT3** **Video Assignment: LT3**
		No class this week (Thanksgiving)	
5	Oct 16	Algorithmic market-making ETF Arbitrage	ALGO2e, ALGO4
6	Oct 23	Price Discovery in Equity Markets	PD0, PD3
7	Oct 30	**Midterm Test (in-class)** **Practice Run: PD3** **Video Assignment: PD3** **Group Assignment: Initial Pitch**	
		No class this week (Reading week)	
8	Nov 13	Hedging using Options: Portfolio Insurance	RIT Hedging 2 & 3 **Video Assignment: H2**
9	Nov 20	Speculating using Options: Trading volatility	RIT Options trading 2 & 3 **Video Assignment: OP3**
10	Nov 27	Hedge Fund Trading Strategies	RIT Merger Arbitrage 1 **Practice Run: ALGO2e, ALGO4**
11	Dec 4	Performance Evaluation (Individual)	**Performance Evaluation: LT3, PD3**
12	Dec 7	Performance Evaluation (Group)	**Performance Evaluation: ALGO2e, ALGO4** **Group Assignment: Final Pitch**

Please note that the last day you can drop this course without academic penalty is November 6, 2023.

Other Useful Links

- [Become a volunteer note taker](#)
- [Accessibility Services Note Taking Support](#)
- [Credit / No-Credit in RSM courses](#)
- [Rotman Commerce Academic Support](#)

URL links for print

- ACORN: http://www.acorn.utoronto.ca/
- Email Accessibility Services: accessibility.services@utoronto.ca
- Accessibility Services website: http://studentlife.utoronto.ca/as
- University's Plagiarism Detection Tool FAQ: https://uoft.me/pdt-faq
- The University of Toronto's Code of Behaviour on Academic Matters: http://www.governingcouncil.utoronto.ca/policies/behaveac.htm
- Information Commons Help Desk: http://help.ic.utoronto.ca/category/3/utmail.html
- Become a volunteer note taker: https://studentlife.utoronto.ca/program/volunteer-note-taking/
- Accessibility Services Note Taking Support: https://studentlife.utoronto.ca/service/note-taking-support/
- Credit / No-Credit in RSM courses: https://rotmancommerce.utoronto.ca/current-students/degree-requirements/credit-no-credit-option/
- Rotman Commerce Academic Support: https://rotmancommerce.utoronto.ca/current-students/academic-support/
- Book an appointment with a writing or presentation coach: http://uoft.me/writingcentres
- Writing and Presentation Coaching academic support page: https://rotmancommerce.utoronto.ca/current-students/academic-support/writing-and-presentation-coaching/
- Centre for Professional Skills Teamwork Resources page: https://rotmancommerce.utoronto.ca/teamwork-resources
- Book an appointment with a Teamwork Mentor: http://uoft.me/writingcentres