

Course Outline

RSM 434 H1F

Financial Trading Strategies

Fall 2020

Course Meets:

L0101	Thursdays	12pm – 2pm	Online – Synchronous
L0201	Thursdays	2pm – 4pm	Online – Synchronous

Course Delivery: This course will be offered online synchronously during the appointed time.

Instructor: **Craig Geoffrey**
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Office Hours: **Day, Time**, online mechanism preferred

Course Scope and Mission

At the conclusion of the course, I want students to understand what is happening in capital markets by experiencing decision-making in the Rotman Interactive Trader (RIT) simulated market. This is a learn-by-doing course where students will develop their understanding experientially via trial and error (trading in the simulated market) – you will be actively participating 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 (how much can I trade?), the relationship between time and uncertainty (do I trade now or wait for a better/worse price?), and the necessity of taking on risk (if I don't make any trades, how can I make any money?).

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 Proprietary traders to introduce the mechanics of trading and fundamental issues when trading in markets (liquidity, risk, behavior) and then progress to (arguably) the most important function of a market, price discovery (how prices are formed by impounding information). In combination with the content in the videos and quizzes, students will then have a solid background that can be applied to specific types of trading strategies (arbitrage, private information, market-making) 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 Arbitrage

Students will be introduced to the unique market dynamics of arbitrage trading and develop trading strategies by identifying mispricing opportunities and analyzing profitability across different trading contexts.

4. Introduction to Algorithmic Trading

Students will learn to create algorithms that automatically follow trading instructions to capture various profit opportunities while managing their positions and order flow to avoid taking unnecessary risks.

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>.

Course Prerequisites

Course Prerequisite: RSM332

Course Exclusions: RSM412 – Financial Trading Strategies

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.

Required Technology

For Fall-Winter 2020-21, this course may be conducted entirely online. To participate fully and to complete the course successfully, you must ensure you have a computer with a working webcam, microphone and reliable access to an internet connection. For further details, please visit this link: [Recommended Technology Requirements for Remote/Online Learning](#)

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 performance of a student in individual courses. Each student shall be judged on the basis of how well they have command of the course materials.

Evaluation	Grade	Due Date
Quercus Quizzes	14 Marks	Throughout the Term (7 quizzes each worth 2 marks)
In-Class Participation	5 Marks	Throughout the Term
Video Assignments	3 Marks	AT2 Algo Practice Run Reflection (Oct 9)
	4 Marks	Behavioral Self-Assessment (Oct 30)
	4 Marks	ALGO2 / ETF Arb Practice Runs Reflection (Nov 27)
Written Report	5 Marks	AT2 ALGO / ALGO2 / PD3 ALGO (Nov 27)
RIT Performance	8 Marks	LT3 Performance Evaluation (Oct 22)
	8 Marks	PD3 Performance Evaluation (Nov 5)
	8 Marks	EVNEW Performance Evaluation (Nov 26)
AT2 Algo Project	2 Marks	AT2 Algo Practice Run (Oct 1)
	10 Marks	AT2 Algo Performance Evaluation (Oct 15)
ALGO2 Project	4.5 Marks	ALGO2 Practice Runs (Oct 8, Oct 29, Nov 26) (1.5 Marks each)
	10 Marks	ALGO2 Performance Evaluation (Dec 3)
PD3 ALGO Project	4.5 Marks	PD3 ALGO Practice Runs (Nov 5, Nov 19, Nov 26) (1.5 Marks each)
	10 Marks	PD3 ALGO Performance Evaluation (Dec 3)

Course Format and Expectations

Quercus Quizzes

I want class time to focus on work that requires the lab (i.e. trading), as opposed to lecturing in the lab. To accomplish this, I am pushing the former lecture component outside of class time and offering the following Faustian Bargain: as compensation for spending added time outside of class watching videos on your own (instead of me reading the slides to you during class), we will have no final exam. One quiz, called “News Item”, will be about a news article that I will post on Quercus as opposed to videos, but the gist is the same.

Part of this bargain is a “trust but verify” regime that requires you to complete a series of quizzes that are tied to the videos. Quizzes are available to be completed at any time, with deadlines spaced throughout the term. Quizzes are worth 2 Marks each. A late penalty of 0.5 marks is applied for each 24 hours that elapse after the deadline. You will have 30 minutes to complete each quiz – once you start the quiz the timer starts.

To be effective, the quiz deadlines are set to be the day BEFORE we cover each video’s material with the in-class RIT cases (the Faustian part of the Bargain). This means quizzes are due by 11:59pm on the Sunday before class.

In-Class Participation

My primary goal in assigning participation marks is to encourage students to share their experience as we go through the cases. It is helpful for other students to hear what worked or didn’t work well for you as you are trading, and vice versa. As such, grades are not assigned based on “correctness”, but on “helpfulness”. In-class questions about video content or quizzes will also count as participation.

As an added bonus, students who share in at least one class will be allowed to substitute their own personally selected login for their Student ID in RIT. Instead of 123456789 you could be Ragnarok (actually no, as I have already taken this name for one of my algorithms, but you get the idea) or something equally entertaining (all logins must be approved by the instructor...). This becomes more meaningful when we get into the algorithmic cases and performance is displayed real-time. To rename a group with a personalized name, all group members must have participated in class.

My secondary goals reflect the idea that generally, comfort with public speaking translates to comfort in a job interview (and perceived confidence from the point of view of the recruiter) and trading floors are traditionally loud places filled with people who don’t shut-up, so a little class participation now can payoff in your future.

Video Assignments

If you were working in a trading environment, you would need to periodically report on progress or outcomes to your boss who will have little patience – you will have a very short amount of time to make your point. To practice this succinct delivery, there are three video assignments. Each video assignment will be completed on Comunicado (details below), on which you will record your video and receive feedback. Each video is worth 3 or 4 marks, covers a different topic, and will be a maximum of 60 seconds in length. **Even though you can work in groups for the algorithmic cases, the videos are an individual assignment (this will make more sense as you read below).**

Hopefully, the reflective nature of the videos gives you a sense of good/best practices for making decisions in financial markets. Two of the videos will cover your experience developing your algos while the third asks you to think about your own behavioral biases and how they affect your decisions. With respect to algos, the practice runs and performance evaluation put you into the midst of a design, test (i.e. practice runs), revise your design based on testing (i.e. reflect on the practice runs), test again, revise again, etc. development cycle which is critical to learning how markets operate as reflected by the results of your trading strategy (trial and error!). This learning cycle may be affected by your personal risk preferences/behavioral biases which can dictate your trading strategies and execution decisions. Some employers are also using video recordings as part of their recruiting process, which makes the video assignments specific training to land a job!

You can record 3 videos for the AT2 Algo Practice Run Reflection and choose which of the videos you want to submit. For the Behavioral Self-Assessment video, you can record 2 videos and choose the one you want to submit. For the final video assignment, where you will choose to comment on either the ALGO2 or PD3 ALGO case practice run, you will only be able to record 1 video (which is the video that will be submitted).

In the AT2 Algo Practice Run Reflection video, you will report what you learned about your AT2 Algo from the AT2 Algo practice run. In particular, your video should describe areas of improvement for your algo (i.e. what did your algo do wrong or not completely do right) and possible fixes you may try. The AT2 Algo Video is due on October 9th. A 0.5 mark deduction will be applied for each day late.

The Behavioral Self-Assessment is all about you! Your video should describe your personal feelings about trading and risk and how/why your personality affects your trading decisions. There is no need to worry about jargon or theory, just describe how you feel. For example, are you nervous about entering trades with the maximum volume and consequently enter trades with smaller quantities? Do you like to take a position as soon as possible in the case to maximize potential profit, regardless of the risk of also maximizing potential losses? Which is more important to you, the profit/loss metric or the semi-standard deviation adjustment? The goal is for you to think about how your emotion impacts your decision-making. The ultimate goal of uncovering your behavioral biases is to eliminate their influence on your decisions. The Behavioral Self-Assessment is due October 30. A 0.5 mark deduction will be applied for each day late.

For the ALGO2/PD3 ALGO Practice Run Reflection you will choose to talk about either your ALGO2 or your PD3 ALGO Practice Run. Since this is your second Practice Run Reflection, you are expected to be more exacting in your description of what went wrong/not right and how you might fix/improve your algo. To this end, **as part of the ALGO2/PD3 ALGO Practice Run Reflection, you are required to submit the trading report from the practice run and a copy of your Python code** (online submission via Quercus – one copy of each per group) **and reference both items in your video** (i.e. be specific about your trading results and your code). The ALGO2/PD3 ALGO video is due November 27th. A 0.5 mark deduction will be applied for each day late.

The Communicado Platform

The Mind-Brain Hive within the Desautels Centre for Integrative Thinking has created a platform – Communicado – that we will be utilizing 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 Communicado platform for the video assignments in **RSM 434**. Communicado is **ideally accessed in Chrome**, but you can use Firefox or Edge as well. To activate your account, you will receive an email from admin@communicado.ca with the Subject Line '**Communicado Account Activation**'. 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 **7 days** of receiving the activation email, you will need to go to the sign-in page and click on "Did you forget your password?" link and follow the instructions. You will be sent another activation email.

For all video submissions 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 (a few seconds is all that is necessary). For each assignment, grades are assigned based on the sophistication of the insights in the video assignment and the clarity of your explanation. The rubric for the video assignment will be posted on Quercus.

Written Assignment

At some point in your career you will be called on to pitch an idea that you originated. A good pitch is short, focused, and backed by evidence (especially in capital markets). You will submit a 2-page written report that pitches one (1) of your algorithmic trading strategies (i.e. the strategy you used in AT2 Algo or ALGO2 or PD3 ALGO). **The written assignment is an individual**

assignment. If you are working in a group of 2, each member of the group must submit a written report on a different algorithm.

Your 2-page report should include a description of the strategy, data regarding its performance (drawn from practice or performance evaluations), comparison with the market's performance, and commentary about the strategy's performance (e.g. why you are recommending the strategy, the rationale for the strategy – your “edge” – and anything that makes the strategy special).

The report should NOT be two pages of text. It should include tables, charts, bullet points, and an organization that efficiently delivers your message quickly and unambiguously. The Written Assignment is due November 27th. A 0.5 mark deduction will be applied for each day late.

RIT Performance Evaluations

You will be graded on your performance in 5 RIT cases during the term. Grading for these cases will be based strictly on your **performance trading these cases during class**. The cases are designed such that students who understand and apply the learning objectives better will perform better.

The grading scheme below may seem overly complex, but it is intended to serve a purpose. The grading scheme is designed to achieve two simultaneous goals: reward students who perform well (i.e. apply the case learning outcomes, as measured by Profit/Loss or other metric) while penalizing random luck (running each case 5 times for grades, semi-standard deviation or other risk adjustment). If you remember your previous finance courses, I am effectively imposing a risk-aversion preference onto your grading scheme. All cases use the minimum volume requirement in the grading scheme.

Minimum Volume Requirement

There is no job, especially on a trading floor, where you will be compensated for doing nothing. In the workplace spirit of “do-something-to-get-something”, you must trade some minimum number of shares in each simulation run for grades, or **you will receive a grade of 0** for that simulation run.

The minimum required trading volume will vary by case, but will be at least the net limit for that case. The traded volume is the total of all shares bought and sold. If the minimum number of shares for a case is 25,000, you must buy and/or sell at least 25,000 shares. For example, you could buy 12,500 and sell 12,500, or buy 25,000. Positions that are held at the end of the case (i.e. open positions when the case ends) will **not** count towards the volume total.

Minimum volume requirements by case:

RIT Evaluation	Shares
AT2 Algo	100,000
LT3	100,000
PD3	100,000
EVNew	25,000
First ALGO2 Practice Run	25,000
Second ALGO2 Practice Run	50,000
Third ALGO2 Practice Run	75,000
ALGO2	100,000
First PD3 ALGO Case Practice Run	25,000
Second PD3 ALGO Case Practice Run	50,000
Third PD3 ALGO Case Practice Run	75,000
PD3 ALGO Case	100,000

LT3*, PD3, EVNew, ALGO2 (including practice runs), and PD3 ALGO (including practice runs) use the following grading scheme:

Profit/Loss Ranking: students are ranked by Profit/Loss (highest to lowest) in each run with the highest Profit ranking 1st and the lowest Profit ranking last (e.g. 50th out of 50). Each rank is then assigned a grade between 5 and 10, with 1st place receiving a grade of 10 and last place a grade of 5. Grades between 1st and last are determined by the distance between ranks and the grades-per-rank. The range between the highest and lowest grades (i.e. $10 - 5 = 5$) is divided by the range between 1st place and last place (e.g. $50 - 1 = 49$), giving us a grade-per-rank measure.

For example, if there were 50 students trading in the simulation, the grade-per-rank would be $5 / 49 = 0.10204$. Grades are then assigned based on the number of ranks between 1st (or last) place and the grade-per-rank. For example, 2nd place is 1 rank away from 1st place, so would receive a grade of $10 - 1 \times 0.10204 = 9.8980$ (or $5 + 49 \times 0.10204 = 9.8990$). 37th place would receive a grade of $10 - 36 \times 0.10204 = 6.3265$ (or $5 + 13 \times 0.10204 = 6.3265$).

The grades across all the runs for a case are used to compute an average Profit/Loss grade for the case. If the minimum volume requirement is not met, the grade for that run is 0, and this 0 is included in the average calculation. For example, if the student had grades of 7.5, 6, 8, 9, and 0 (the last run did not satisfy the minimum volume requirement), their average Profit/Loss grade would be 6.1.

Semi-Standard Deviation Ranking: a semi-standard deviation will be computed for each student's Profit/Loss using 0 as a hurdle (i.e. only losses will be included). For example, if a student's Profit/Loss is \$100, -\$1,000, -\$500, \$400, -\$600, their semi-standard deviation would be computed using 0, -1,000, -500, 0, and -600 as inputs, resulting in a semi-standard deviation of 382.

This semi-standard deviation is ranked from lowest semi-standard deviation (1st place) to highest semi-standard deviation is (last place). Importantly, students who do not generate any losses will be tied for 1st place (all students without any losses will have a semi-standard deviation of 0). If 25 students tie for 1st place (no losses), the best rank that a student with a non-zero semi-standard deviation can achieve is 26.

The profit/loss grading process is then applied to the semi-standard deviation ranks. For example, if the semi-standard deviation of 382 earns a 26th place rank, the grade would be $10 - 25 \times 0.10204 = 7.4490$ (or $5 + 24 \times 0.10204 = 7.4490$).

Final Ranking: the student's average Profit/Loss grade is averaged with the student's semi-standard deviation grade if the semi-standard deviation grade is lower; if the semi-standard deviation grade is higher than the Profit/Loss grade it has no effect.

Although complicated, the grading scheme will reduce the rank, and therefore the grade, of a student who lost money versus a student who did not. For greater clarity, student X, who had a lower rank (grade) in the Profit/Loss calculation than student Y, but who does not incur any losses, could end up with a higher grade.

Rule No. 1: Never lose money.

Rule No. 2: Never forget rule No. 1

- Warren Buffet

* LT3 uses the Adjusted Profits outlined in the case brief

AT2 Algo uses the following grading scheme:

Distance from Market VWAP Ranking: students are ranked by the distance (positive or negative) between their VWAP and the market's VWAP in each run with the lowest distance ranking 1st and the highest distance ranking last (e.g. 50th out of 50). Each rank is then assigned a grade between 5 and 10, with 1st place receiving a grade of 10 and last place a grade of 5. Grades between 1st and last are determined by the distance between ranks and the grades-per-rank. The range between the highest and lowest grades (i.e. $10 - 5 = 5$) is divided by the range between 1st place and last place (e.g. $50 - 1 = 49$), giving us a grade-per-rank measure.

For example, if there were 50 students trading in the simulation, the grade-per-rank would be $5 / 49 = 0.10204$. Grades are then assigned based on the number of ranks between 1st (or last) place and the grade-per-rank. For example, 2nd place is 1 rank away from 1st place, so would receive a grade of $10 - 1 \times 0.10204 = 9.8980$ (or $5 + 49 \times 0.10204 = 9.8990$). 37th place would receive a grade of $10 - 36 \times 0.10204 = 6.3265$ (or $5 + 13 \times 0.10204 = 6.3265$).

The grades across all the runs for a case are used to compute an average Distance from Market VWAP grade for the case. If the minimum volume requirement is not met, the grade for that run is 0, and this 0 is included in the average calculation. For example, if the student had grades of

7.5, 6, 8, 9, and 0 (the last run did not satisfy the minimum volume requirement), their average Profit/Loss grade would be 6.1.

Semi-Standard Deviation Ranking: a semi-standard deviation will be computed for each student's total volume traded by subtracting 100,000 to produce a deviation from the 100,000 share target. For example, if a student's traded volumes are 100,000, 101,000, 99,000, 105,000, 110,000, their semi-standard deviation would be computed using 0, 1,000, -1,000, 5,000, and 10,000 as inputs, resulting in a semi-standard deviation of 4,527.70.

This semi-standard deviation is ranked from lowest semi-standard deviation (1st place) to highest semi-standard deviation is (last place). Importantly, students who trade 100,000 shares exactly will be tied for 1st place (i.e. multiple students will have a semi-standard deviation of 0). If 25 students tie for 1st place (no volume deviations), the best rank that a student with a non-zero semi-standard deviation can achieve is 26.

The Distance from Market VWAP grading process is then applied to the semi-standard deviation ranks. For example, if the semi-standard deviation of 4,527.70 earns a 26th place rank, the grade would be $10 - 25 \times 0.10204 = 7.4490$ (or $5 + 24 \times 0.10204 = 7.4490$).

Final Ranking: the student's average Distance from Market VWAP grade is averaged with the student's semi-standard deviation grade if the semi-standard deviation grade is lower; if the semi-standard deviation grade is higher it has no effect.

Although complicated, the grading scheme will reduce the rank, and therefore the grade, of a student who adhered to the trading objectives (trade only 100,000 shares) versus a student who did not. For greater clarity, student X, who had a lower rank (larger Distance from Market VWAP) in the Distance from Market VWAP calculation than student Y, but who does not commit any volume deviations, could end up with a higher grade.

*Do or do not.
There is no try.
- Yoda*

Algorithmic Trading Projects

You are going to complete 3 algorithmic trading projects. Each of these projects requires you to build an algorithmic trading program in Python (yes, Python only, no VBA). These are projects instead of cases because the performance evaluation will pit your algorithms against the market – you are building a machine to trade for you. You can work individually or in a group of 2 people (must be in the same section). Groups of 2 only need to run 1 algo for practice runs/evaluations.

ALL students must enroll in a group on Quercus, even if they intend to work as an individual (i.e. a group of 1). During the Algorithmic Trading Project practice runs/evaluations you will use your group name as your Trader ID (this will make more sense once we start using RIT).

Each project has one or more practice runs followed by a separate performance evaluation. The practice runs are evaluated using the same grading scheme as the final performance evaluation. The goal of the practice runs is to give you experience with your algorithm trading against other algorithms over an extended period of time. Ideally, this will provide real-time feedback that you can use to debug your code and adjust your trading strategy. The practice runs are also intended to short-circuit the risk of last-minute project efforts that leave students (sadly) without a working algorithm for their performance evaluation.

Each practice run is worth 1.5 or 2 marks. The AT2 Algo case has 1 practice run, while the ALGO2 and ETF Arb cases each have 3 practice runs in total. The grading for these runs is the same as the performance evaluation grading scheme, but there is only 1 run per practice run session that is being graded. Since there is only 1 run for each practice run session, the semi-standard deviation penalty is not applied for the practice runs. The minimum volume requirement will be applied. You should view the practice runs as a low-risk forum for testing your algorithm.

The final version of your algorithmic trading programs will run in a performance evaluation for each case. These performance evaluations will be composed of 5 iterations each and adhere to the performance evaluation grading scheme (including the semi-standard deviation adjustment). **The performance evaluations are worth 10 marks each.**

To aid students with coding, tutorial times are scheduled throughout the term (see tutorial schedule). One of the TAs will be in attendance at each of the tutorial sessions to answer questions and help with coding issues.

Tutorial Schedule:
TBD

[Turnitin.com:](#)

Normally students will be required to submit their course essays 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.

Written Assignments:

Please note that **clear, concise and correct writing** will be considered in the evaluation of the Written Report. 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

(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.

Rotman Commerce Centre for Professional Skills Teamwork Support:

The Algo projects require students to work in teams of up to 2. Working as a team is challenging; this is true both in the real world and in your academic classes. However, learning to work together in teams is an important aspect of your education and preparation for your future careers. You are encouraged to review the teamwork resources available to all Rotman Commerce students at <https://rotmancommerce.utoronto.ca/teamwork-resources> while navigating these challenges, but keep in mind that supports are also available for when you think you may need extra help.

New in the 2020-2021 academic year, the Rotman Commerce Centre for Professional Skills (RC-CPS) will offer appointments with Teamwork Mentors for any teams encountering challenges in their teamwork. Some possible reasons you might book an appointment with a Teamwork Mentor include:

- Team members have identified constraints on their time, work or accommodations they require that conflict with necessary timelines for the team.
- Teams are unsure how to divide their workload for a team project.
- Teams are concerned about how to integrate the individual contributions of each member and how to ensure team members are contributing equally.
- Teams are concerned about how to ensure all group members are aware of academic integrity guidelines (e.g. properly attributing sources) and follow them.
- Teams would like to be able to communicate more effectively with each other, particularly when navigating a remote work academic environment.

To book a meeting with a Teamwork Mentor, send an email to rotmancommerce.teamworkhelp@utoronto.ca with the course code (e.g. RSM100) and team number (if available) in the subject line of the email. Any member of the team may reach out individually to book an appointment, but we also encourage teams to book their appointments as a team. You will normally receive a response within 24-36 hours, but note that during busy times of the semester the waiting period may be longer. Be proactive in booking your meeting, and do so **as soon as** challenges arise!

If you are a student registered with Accessibility Services, and extensions are one of your academic accommodations, you should consult with your Accessibility Advisor about this course. For considerations pertaining to teamwork and accessibility, please see information in the section on Accessibility Needs below under the Policies and Procedures heading.

Credit/No-Credit Option in Rotman Commerce

You may request to Credit/No-Credit (CR/NCR) an RSM course in the following cases only:

- The course will not be used for any specialist or focus, including the 8.0 RSM FCE requirement.
- The course does not have a group work component.

If you wish to request CR/NCR for an RSM course, you must contact a Rotman Commerce academic advisor by the drop deadline for the current term. **The deadline for this term is November 9, 2020.**

Final approval is on a case-by-case basis with the permission of the Director, Rotman Commerce.

Weekly Schedule

Class Date	Topic	Cases	Practice Runs	Quiz
10-Sep	Introduction to the course, RIT, Python			
17-Sep	Agency Trading (order entry, liquidity)	AT1 and AT2		Quiz 1
24-Sep	Algorithmic Trading (VWAP)	AT2 Algo		Quiz 2
1-Oct	Algorithmic Trading (Market Making)	ALGO2	AT2	
8-Oct	Liability Trading (tender offers, PnL)	LT2 and LT3	ALGO2	Quiz 3
15-Oct	Price Discovery (Private Information)	AT2 Algo Evaluation; PD0/PD2		Quiz 4
22-Oct	Price Discovery (Private Information)	LT3 Evaluation; PD3		Quiz 5
29-Oct	Algorithmic Trading (News)	PD3 Algo	ALGO2	News Item
5-Nov	Equity Valuation	PD3 Evaluation; EV1/EV2	PD3	Quiz 6
12-Nov	Reading Week - No Classes			
19-Nov	Equity Valuation	EVNew	PD3	
26-Nov		EVNew Evaluation	ALGO2, PD3	
3-Dec	ALGO SUPERDAY! ---- ALGO2 Evaluation, PD3 Algo; Course wrap-up			

Please note that the last day you can drop this course without academic penalty is November 9, 2020.

Policies and Procedures

Missed Tests and Assignments (including mid-term and final-term examinations)

Students who miss a test or assignment for reasons entirely beyond their control (e.g. illness) may request special consideration.

In such cases, students must:

1. Notify the instructor AND the Rotman Commerce Program Office **on the date** of the missed course deliverable, e.g. missed test, final assessments, assignment or class (in the case of participation marks).
2. Complete a [Request for Special Consideration Form](#) and submit it along with supporting documentation this may include either your Self-Declaration of Absence on ACORN, or [Verification of Student Illness or Injury form](#) to the Rotman Commerce Office within **2 business days** of the originally scheduled course deliverable.

Students who do not provide appropriate or sufficient supporting documentation will be given a grade of 0 (zero) for the missed course deliverable.

Note that documentation must clearly establish that you were ill or had other circumstances that prevented you from attending on the date in question. After-the-fact reports are not sufficient.

Missed evaluations will have their final grade weight distributed evenly to remaining evaluations in the same evaluation category. If there are no remaining evaluations in the same category the weight will be distributed evenly to the remaining evaluations.

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 temporary or ongoing disability or health concern, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible at accessibility.services@utoronto.ca or studentlife.utoronto.ca/as.

For courses with deliverables that require you to work in teams, please note the following. If you are a student registered with Accessibility Services, and extensions are one of your academic accommodations, requests for extensions impact everyone in the group. As a result, requests for late submissions of any component of teamwork will require compelling reasons, advance notice, and must work for everyone in the team. You are encouraged to discuss with your course instructor, Accessibility Advisor, and other team members what you need in order to successfully complete your coursework. Additionally, the Rotman Commerce Centre for Professional Skills offers Teamwork Mentors (see section above) who can help you and your team discuss how to support you effectively and how to develop a work plan that meets the needs and constraints of all team members.

Volunteer Notetaking

If you're interested in helping to make our classroom more accessible, volunteer to be a notetaker!

Accessibility Services needs dependable volunteer notetakers to assist students living with a disability to achieve academic success. All you have to do is attend classes regularly and submit your notes consistently.

1. Register online as a Volunteer Note-Taker at:

<https://clockwork.studentlife.utoronto.ca/custom/misc/home.aspx>

2. Follow the link that says "Volunteer Notetakers"

3. Select your course and upload a sample of your notes

4. Once you have been selected as a notetaker, you'll get an email notifying you to upload your Notes.

If you have any questions or require assistance, please email as.notetaking@utoronto.ca or call 416-978-6186.

Volunteers may receive co-curricular credit or a certificate of appreciation.

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 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 U of T 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 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 help.ic.utoronto.ca/category/3/utmail.html.

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.

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 ACORN, 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. 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.

FIPPA Language

Notice of video recording and sharing (Download permissible; re-use prohibited)

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session.

Course videos and materials belong to your instructor, the University, and/or other source depending on the specific facts of each situation, and are protected by copyright. In this course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share, or use them for any other purpose without the explicit permission of the instructor.

For questions about recording and use of videos in which you appear please contact your instructor.