



Commerce 4FI3
Market Trading with Futures and Forwards
Fall 2019 Course Outline
Finance and Business Economics
DeGroot School of Business
McMaster University



COURSE OBJECTIVES

The experimental course attempts to develop practical skills in trading financial securities with a focus on risk management and return enhancement through role playing. The course deals comprehensively with the increased importance played by risk and uncertainty in today's financial markets.

INSTRUCTOR AND CONTACT INFORMATION

Instructor: Dr. John J. Siam

TA: Lynda Xu

Office Hours:

Office Hours:

Tuesdays 10:30 – 11:30 DSB 306

Tuesdays 2:30 – 3:30

Wednesdays 1:30 – 2:30 RJC 126

and by appointment

Email: siamj@mcmaster.ca

Tel: (905) 525-9140 x27028

Class location: DSB 122A, Allen H. Gould Trading Floor (GTF)

Course Website: <http://avenue.mcmaster.ca>

COURSE ELEMENTS

Credit Value:	3	Leadership:	Yes	IT skills:	Yes	Global view:	Yes
Avenue:	Yes	Ethics:	Yes	Numeracy:	Yes	Written skills:	Yes
Participation:	Yes	Innovation:	Yes	Group work:	Yes	Oral skills:	Yes
Evidence-based:	Yes	Experiential:	Yes	Final Exam:	No	Guest speaker(s):	Yes

SELECTION CRITERIA FOR THE COURSE

Prerequisites: Completion of Commerce 3FA3 (Introduction to Finance) in good standing, *enrolment is limited to a maximum of 20 students.*



COURSE DESCRIPTION

This experiential course, students are introduced to theoretical and empirical issues of different financial instruments, their valuation methodology, and their institutional uses in risk management. Market microstructure knowledge provides students guidance in implementing their trading strategies. Students are able to trade money market instruments, bonds, equities, indices, ETFs, currencies, commodities and their corresponding futures and forwards; focusing on trading strategies that minimize market exposure through risk measurement. Pedagogically, students are assigned securities and their corresponding futures and forwards to trade subject to financial markets outlook and their expectations. Fictional accounts of one million dollar per currency (Canadian/US) are created and evaluated at the end of the course. In addition, students are divided into subgroups that act as individual investment/trading firms.

COURSE ORGANIZATION

The experiential course uses a combination of lectures, presentations, supervised and unsupervised trading. The class meets once per week for a three-hour session. Classes and trading sessions are conducted at the Allen H. Gould Trading Floor (GTF). Supervised trading and weekly trading cases (see below) are conducted during class time; the students are expected to justifying their trading positions/decisions using due diligence and market microstructure. The trading sessions are used to systematically evaluate students' trading positions and offer suggestions and recommendations. Trading sessions are followed by lectures where trading strategies are scrutinized. In addition, students are responsible for trading their portfolio a *maximum* of four hours per week (at times of their choice). All trades will be logged to prevent falsification of trading histories.

LECTURES CONTENT

The aim of the course is to provide a comprehensive treatment of financial risk and uncertainty faced by firms and individuals exposed to financial markets. The course attempts to develop practical skills by focusing on hedging and hedging strategies, financial engineering, risk management (market risk), measuring and monitoring market risk across complex and volatile financial market.

Lectures

The course includes lectures that review stocks, bonds, money and currency markets, as well as, the derivatives markets. The focus is on trading and trading strategies that utilize cash securities in combination with derivatives. Students are introduced to different financial instruments, institutional details, back office, markets microstructure, exchange and over-the-counter derivatives, principles of valuation, risk management and hedging techniques. Speculative strategies are also discussed and are examined in detail. The specific topics cover: exchange and over-the-counter trading, market microstructure, reading the “signs” and “pulse” of the market, understanding the electronic book, risk/reward analysis, arbitrage, government and corporate securities, selection criteria, basis risk vs. price risk, degrees of trading aggressiveness, uses of futures and forwards, such as, managing interest rate exposure, futures and forward hedging, futures arbitrage, various advanced and exotic futures spreads.



SKILL BUILDING TOOLS OF THE TRADE

“Trading Centres put emphasis on experiential learning and encourage critical reasoning and creative thinking. Intensive workshops, team projects, and real world experience with traditional lectures establishes a dynamic forum for producing competent managers. Partnerships with industry ensure that the skills and competencies developed are relevant in today’s marketplace” (Siam¹). The course uses a number of tools that provide core and discipline specific competencies that link education and workplace. Students who are able to build industry tools are more valuable in the workplace and open new career opportunities for themselves.

I. *Real-time Trading Sessions*

At the beginning of the course each student is assigned equities, fixed income securities (together, the “cash securities”) and a fictional account of one million dollars. During the first four weeks, students trade the cash securities. In week five, students are assigned futures on each of their underlying securities. After receiving their futures, students begin trading the cash securities and their futures. Risk minimizing strategies typically involve trading combinations of cash and derivatives securities.

II. *Group Monthly Market and Securities (MMSA) Analysis*

Students are advised to form groups (Maximum five members), and work on Monthly Market and Securities Reports (MMSA). The reports present each group’ outlook for relevant markets (Debt, Commodities, Currencies, Equity Markets...etc.), plus detailed fundamental and market microstructure analysis of the securities assigned to each member of the group. The reports include recommendations (buy, sell, hold), and present the basis of the individual trading strategies. These reports will assist students in building their individual Final Report. The reports are optional and may be submitted to the TA for consultation and form the basis of the Final Report.

III. *Tutorials*

A number of tutorials designed to transfer technical and professional knowledge and knowhow as part of the experiential learning process. These interactive and specialized tutorials are used to teach by examples the use of software like Thomson Reuters’ Eikon, Bloomberg professional, Financial Trading System (FTS) software and tutor trading processes and techniques².

IV. *Trading Cases*

A number of trading cases are assigned throughout the course. The objectives of the trading cases is to provide an understanding of important market microstructure concepts, such as, trading, market making, market taking, price discovery, bid-ask spreads/width and market depth, trading frequency and trading volume. An ECN (Electronic Communications Network) installed at the HIDC network that forms a dealing system that allows the instructor to run cases using the students as the trading crowd. Each case poses a different trading question. The trading problem

¹ Siam, J. (2005), “University Trading Centers and their Role in Business Education”, *Journal of Financial Education*, Vol. 31 Lead Article.

² See Course Outline.



is designed so students can apply finance concepts in formulating their trading strategies. Typically, before each trading session the students are quizzed on the assigned case.

V. *Individual Final Project*

The individual final project is a record of the student trading activities, trading justifications, summary of return(s) on trading positions, analysis of market risk (inherent in your trading), collection of students acquired market insight and savvy. The report must build on the student group assignments with emphases on individual reasoning and value added. The report starts with executive summary followed by an economic review detailing; universal economic outlook, markets outlook and outlook of your trading horizon. The final report summarizes weekly expectations in a coherent manner, includes in-depth analysis and justification for the trading activities. The grade received is based on the final value of the portfolio, return on investment, market and securities analysis, individual reasoning, risk management applications and “the manner” in which the wealth was accumulated.

Participation and Conduct

Strict adherences to the codes of conduct established by the Educational Trading Center are pre-requisites. Students are reminded that they must adhere to the standards of academic ethics of the University. The standards are discussed in the booklet of Senate Policy Statements provided to you at registration and also are available from the Senate Office. Any deviations from the norms may lead to disciplinary actions.

LEARNING OUTCOMES

Upon completion of this course, students will be able to complete the following key tasks:

- ✓ Play the role of the decision maker(s) as trader or/and as a portfolio manager. In two setting: as an individuals and as part of your group (firm);
- ✓ Use different platforms (Reuters, Bloomberg...etc) to assess information to evaluate the performance of markets and individual companies and develop the ability to forecast market direction and companies prospects;
- ✓ Calculate all necessary industry metrics, marketing information, financial ratios and trends to defend your market view and recommendations;
- ✓ Identify important market opportunities and challenges facing a market/firm and setting out a course of action (strategy) to benefit from them;
- ✓ Implement changes (risk management techniques), as necessary, in order to enhance and protect your allocated capital;
- ✓ Acquire and develop networking skill through the TiR visits that might open career doors in financial services industry.
- ✓

REQUIRED COURSE MATERIALS AND READINGS

THE Trading Manual, Forth Canadian Edition Version 4.0, John J. Siam *\$120.00*
Available at the Allen H. Gould Trading Floor.

Lecture Notes, Assignment and other course content *Free*



Download from the 4FI3 website (<http://avenue.mcmaster.ca>)

USB drive (at least 256MB) is required to save your trades and information from GTF platforms.

EVALUATION

Learning in this course result from lectures, related readings, assignments, trading simulations, trading cases, group reports, final project and in class discussions. All work will be evaluated on an individual basis. Your final grade will be calculated as follows:

COMPONENTS AND WEIGHTS

The components of the course grade will be weighted as follows, tentatively. The instructor reserves the right to modify the weightings to adjust for more or less material covered during the semester.

COMPONENTS	PERCENT
6 Trading Cases	12
Two Midterm Exams	48
Individual Final Project ³	40
Total	100%
Optional Project ⁴	3 Marks
Participating in DeGroot MarketWatch ⁵	3

NOTE: The use of a McMaster standard calculator is allowed during examinations in this course. See McMaster calculator policy at the following URL:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf>

GRADING CONVENTIONS

A standard grading scale will be used. The instructor will inform you of your marks for participation periodically.

LETTER GRADE	PERCENT	LETTER GRADE	PERCENT
A+	90-100	C+	67-69
A	85-89	C	63-66
A-	80-84	C-	60-62
B+	77-79	D+	57-59
B	73-76	D	53-56
B-	70-72	D-	50-52
		F	00-49

PLACES TO GET HELP WITH YOUR WORK:

³ The Final Project is due one week after end of classes at 5 P.M., the overdue due penalty for the final project is 10% per day.

⁴ To be submitted with the Final Project as an Appendix.

⁵ Upon approval of submitted material/work.



Allen H. Gould Trading Floor (MGD 122A) and financial web sites (listed on the Trading Center web site <http://trading.degrootemcmaster.ca/>).

Communication and Feedback

Students who wish to correspond with instructors or TAs directly via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information as well as confirms the identity of the student. Emails regarding course issues should NOT be sent to the Area Administrative Assistants.

Instructors are required to provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

Instructors may conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery.

Students who wish to have a course component re-evaluated must complete the following form:

http://www.mcmaster.ca/policy/Students-AcademicStudies/Form_A.pdf

In order for the component to be re-read:

- the component must be worth 10% or more of the final grade in the course
- students pay a fee of \$50 in Gilmour Hall #209 and the receipt is then brought to Student Experience - Academic Office (formerly the APO) in DSB 104
- the Area Chair will seek out an independent adjudicator to re-grade the component
- an adjustment to the grade for the component will be made if a grade change of three points or greater on the 12 point scale (equivalent to 10 marks out of 100) has been suggested by the adjudicator as assigned by the Area Chair
- if a grade change is made, the student fee will be refunded.

EXTRACURRICULAR ACTIVITIES

- ***DeGroot MarketWatch*** (<http://trading.degrootemcmaster.ca/degrootemmarketwatch/>)

The weekly *DeGroot MarketWatch (DMW)* is financial letter designed to inform/educate DeGroot and the surrounding communities. The *DMW* prepared mostly by students and supervised by myself serves as an experiential training ground allowing dedicated students to gain hands on experience in concaving to readers market information and commentary. The *DMW* tracks the pulse of markets, business news, finance information, commentary, investment tools, and stories of interest submitted by students. Components of the *DMW* financial letter are:

- ✓ Market Indices: Summarizes last week's major markets' activities (numbers and charts).
- ✓ Economic Calendar: Outlines the next week's major economic releases.
- ✓ Canadian Market Summary: Highlights last week's major events.
- ✓ Market Outlook: Expectations for the upcoming week.
- ✓ Story of Interest: An article that highlights a recent story submitted either by a student, faculty member, or an industry professional. To submit a story of interest for a possible publication in the DeGroot MarketWatch.

It is highly recommended that all students signup to receive the weekly DeGroot MarketWatch update (at <http://trading.degrootemcmaster.ca/degrootemmarketwatch/marketwatch-signup/>).



ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at:

www.mcmaster.ca/academicintegrity

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations

REQUESTING RELIEF FOR MISSED ACADEMIC WORK

Students may request relief from a regularly scheduled midterm, test, assignment or other course components. Please refer to the policy and procedure on the DeGroot website at the link below;

<http://ug.degroot.mcmaster.ca/forms-and-resources/misled-course-work-policy/>

STUDENT ACCESSIBILITY SERVICES

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca.

For further information, consult McMaster University’s Policy for Academic Accommodation of Students with Disabilities:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-StudentsWithDisabilities.pdf>

ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students requiring a

<http://trading.degroot.mcmaster.ca/>



RISO accommodation should submit their request, including the dates/times needing to be accommodated and the courses which will be impacted, to their Faculty Office normally within 10 days of the beginning of term or to the Registrar's Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

<https://multifaith.mcmaster.ca/riso>

POTENTIAL MODIFICATIONS TO THE COURSE

The instructor reserves the right to modify elements of the course during the term. There may be changes to the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

RESEARCH USING HUMAN SUBJECTS

All researchers conducting research that involves human participants, their records or their biological material are required to receive approval from one of McMaster's Research Ethics Boards before (a) they can recruit participants and (b) collect or access their data. Failure to comply with relevant policies is a research misconduct matter. Contact these boards for further information about your requirements and the application process.

McMaster Research Ethics Board (General board): <https://reo.mcmaster.ca/>
Hamilton Integrated Research Ethics Board (Medical board): <http://www.hireb.ca/>

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrolment in Commerce 4FI3 will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be announced during lecture and/or on A2L. **It is your responsibility to read this course outline, to familiarize yourself with the course policies and to act accordingly.**

Lack of awareness of the course policies **cannot be invoked** at any point during this course for failure to meet them. It is your responsibility to ask for clarification on any policies that you do not understand.



**Fall 2018 Commerce 4FI3 Course Outline
Market Trading with Futures and Forwards**



Lectures	Topics	Material Covered
1	Lecture 1: Introduction to Financial Markets <i>Tutorial 1: Tools of The Trade</i>	Chapters 1 & 2 <i>Appendix 2A & Avenue Handout</i>
2	Lecture 2: The Cash Market <i>Tutorial 2: Start Trading</i>	Chapter 3 <i>Appendix 1A & Avenue H.</i>
3	Lecture 3: Market Direction <i>Tutorial 3: FTS Interactive Cases plus RE1s</i>	Chapter 4 <i>Avenue Handout</i>
4	Lecture 4: Interest Rates Dynamics and Market Outlook <i>Tutorial 4: Thomson Reuters Eikon</i> <i>In class Case RE1s (practice)</i> <i>Start Trading your Securities in FTS Real Trader</i>	Chapter 5 <i>Avenue Handout</i>
5	MID-TERM EXAM 1 (<i>During class at 11:30 PM</i>) <i>Tutorial 5: Bloomberg</i> <i>In class Case FTS Trading RE1s (practice)</i>	Duration 80 minutes <i>Avenue Handout</i>
6	Lecture 5: The Forward and Futures Markets <i>Tutorial 6: RE2s</i> <i>In class FTS Trading Case RE1s (practice)</i> <i>Deadline to Add Securities to FTS Real Time Trader (Oct. 19,2018)</i>	Chapter 12 <i>Avenue Handout</i>
7	Lecture 6: Trading with Futures: The Basics <i>Tutorial 7: B02as</i> <i>In class FTS Trading Case RE2s (for marks)</i>	Chapter 13 <i>Avenue Handout</i>
8	Lecture 7: Interest Rates Futures Spreads <i>Tutorial 8: B06s</i> <i>In class FTS Trading Case B02as (for marks)</i>	Chapter 14 <i>Avenue Handout</i>
9	Lecture 8: Spreading Index Futures <i>Tutorial 9: B03as</i> <i>In class FTS Trading Case B06s (for marks)</i>	Chapter 15 <i>Avenue Handout</i>
10	MID-TERM EXAM 2 (<i>During class at 11:30 PM</i>) <i>Free Trading</i>	Duration 80 minutes
11	Lecture 9: Arbitrage and Advanced Futures/Forward Strategies <i>Tutorial 10: IN2s</i> <i>In class FTS Trading Case B03s (for marks)</i>	Chapter 16 <i>Avenue Handout</i>
12	Lecture 10: Futures Options <i>Tutorial 11: FX2s</i> <i>In class FTS Trading Case IN2s (for marks)</i>	Chapter 17 <i>Avenue Handout</i>
13	Lecture 11: SWAPS <i>In class FTS Trading Case FX2s (for marks)</i>	Chapter 18
FINAL PROJECT DEADLINE: Due on the Monday after the last lecture		