

**Commerce 3FH3
Alternative Investments and Portfolio Management
Fall 2025 Course Outline**

**Finance and Business Economics Area
DeGroote School of Business
McMaster University**

INSTRUCTOR AND CONTACT INFORMATION

Section 1/2/3: WED/TUE/MON

8:30AM – 11:20AM

Dr. Qian Yang

Instructor

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Office Hours: by appointment

Tel: (905) 525-9140 x28605

Student TA

Yasaman Hashemisanjani

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Office: DSB A210

Office Hours: Zoom, by appointment

Course website: <https://avenue.cllmcmaster.ca/d2l/home/727696>

COURSE ELEMENTS

Credit Value: 3
A2L: Yes
Participation: Yes

Leadership: Yes
Ethics: No
Innovation: Yes

IT skills: Yes
Numeracy: Yes
Group work: Yes

Global view: Yes
Written skills: Yes
Oral skills: Yes

COURSE OVERVIEW AND OBJECTIVE

The class describes some of the main strategies used by hedge funds and proprietary traders and provides a methodology to analyze them. In class and through exercises, the strategies are illustrated using real data and students learn to use “backtesting” to evaluate a strategy. The class also covers institutional issues related to how trading works, liquidity, margin requirements, risk management, and performance measurement.

The class discusses the main strategies used by hedge funds in individual equity markets (discretionary equity investing, short selling, quantitative equity strategies), in tactical asset allocation of equity indices, currencies, fixed-income, and commodities (global macro, managed futures), and in relative-value arbitrage strategies (fixed income arbitrage).

To analyze these active investment strategies, the class applies tools for performance measurement, backtesting, regression analysis, managing transaction costs, market liquidity risk, funding a strategy, margin requirements, risk management, drawdown control, and portfolio construction. Also, the class discusses the economics underlying these strategies, why certain strategies might work and why others might not.

CODING

We shall use Google Colab/Python to illustrate the hedge fund strategies. Google Colab is a (largely for our purpose) free cloud service that only requires a Google account and connection to the Internet.

IMPORTANT LINKS

- [Mosaic](#)
- [Avenue to Learn](#)
- [Student Accessibility Services - Accommodations](#)
- [McMaster University Library](#)

REQUIRED MATERIALS AND TEXTS

Required: *Efficiently Inefficient: How Smart Money Invests and Market Prices Are Determined*, Lasse H. Pedersen

Textbook Listing: <https://textbooks.mcmaster.ca>

COURSE EVALUATION

GRADE COMPONENT	WEIGHT	DESCRIPTION
Attendance	5%	Attendance sheet
Participation	10%	Active participation in class discussions
Problem Sets	30%	2 problem sets, 15% each
Exam 1	15%	Take-home, submitted via A2L
Exam 2	20%	Take-home, submitted via A2L
Group Report	20%	Hedge fund strategy report, submitted via A2L

COURSE DELIVERABLES

Problem Sets

There are 2 problem sets that will be assigned on A2L. You will be required to submit your work to A2L. This assignment is worth **30%** of your final grade and will be marked individually.

Exam 1 and Exam 2

The two exams will be hosted online on A2L, and are open-book but timed (80 minutes), containing exclusively multiple-choice problems. Exam 1 is worth **15%** of your final grade, and Exam 2 is worth **20%** of your final grade.

Group Report – Hedge Fund Strategy

You will form a group of 5 during the first week of the class. The group shall pick a hedge fund strategy, use real-world data to analyze the strategy, and write a report due on the last week of the class on A2L. The report is worth **20%** of your final grade.

Attendance

Attendance will be taken for every class by disseminating an attendance sheet to collect your signature. Attendance is by subtraction, meaning full attendance receives 5 points (**5%** of final grade), missing one class means 1 point less until all 5 points are exhausted.

Participation

Name cards and class pictures are used to help give credit for your participation. You **MUST** have a name card, with your **full first and last name** clearly written and displayed for every class. Participation is worth **10%** of your final grade. Participation is measured by interactions: averaging one interaction per class earns 5 points; below 5 is calculated as (your number of interactions / number of active classes) * 5; above 5 is calculated by adding 1 point for every 20 percentiles you rank higher than all students with points over 5. Suppose you rank in the 80th percentile among all students who average at least one interaction per class, you earn 5 + 4 = 9 points.

Since student participation is an essential component of this course, official McMaster student ID photographs will be used to ensure that each student is assessed accurately. The instructor will use the photograph to ensure the accuracy of participation marks, group work, and for identifying students for grading purposes.

REQUESTING RELIEF FOR MISSED ACADEMIC WORK

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar [“Requests for Relief for Missed Academic Term Work”](#) and the link below;

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

COURSE MODIFICATION

From time to time there may be a need to remove/add topics or to change the schedule or the delivery format. If these are necessary, you will be given as much advance notice as possible.

GENERATIVE AI

Students may use generative AI for [editing/translating/outlining/brainstorming/revising/etc] their work throughout the course so long as the use of generative AI is referenced and cited following citation instructions given in the syllabus. Use of generative AI outside the stated use of [editing/translating/outlining/brainstorming/revising/etc] without citation will constitute academic dishonesty. It is the student's responsibility to be clear on the limitations for use and to be clear on the expectations for citation and reference and to do so appropriately.

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. **It is your responsibility to understand what constitutes academic dishonesty.**

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. For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](#).

The following illustrates only three forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
- improper collaboration in group work.
- copying or using unauthorized aids in tests and examinations.

CONDUCT EXPECTATIONS

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the [Code of Student Rights & Responsibilities](#) (the “Code”). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online.**

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students’ access to these platforms.

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

Students with disabilities who require academic accommodation must contact [Student Accessibility Services](#) (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a

Program Coordinator. For further information, consult McMaster University's [Academic Accommodation of Students with Disabilities](#) policy.

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 should submit their request to their Faculty Office **normally within 10 working days** of the beginning of term in which they anticipate a need for accommodation 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.

COPYRIGHT AND RECORDING

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors.

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

EXTREME CIRCUMSTANCES

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, Avenue to Learn and/or McMaster email.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrollment in Commerce 3FH3 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.

COURSE SCHEDULE

Commerce 3FH3 Alternative Investments and Portfolio Management Fall 2025 Course Schedule

WEEK	DATE	TOPIC	READING	ASSIGNMENTS
1	Sept. 2/3/8	Discuss: Class Outline, Schedule, Participation, Courseware Discuss: Selecting team members Lecture: Efficiently inefficient markets; trading strategies; understanding hedge funds and other smart money	Introduction Chapter 1	
2	Sept. 9/10/15	Active Investment: Performance measures	Chapters 2	PS1 Assigned (Sept. 15)
3	Sept. 16/17/22	Active Investment: finding and backtesting strategies; portfolio construction; risk management	Chapters 2-4	
4	Sept. 23/24/29	Active Investment: Trading and financing a strategy	Chapter 5	PS1 Due (Sept. 29 midnight)

5	Sept. 30 Oct. 1/6	Exam 1 (No Class, Take-Home, on A2L)	First 4 Weeks	Oct. 6
6	Oct. 7/8/20	Equity strategies: Equity valuation; discretionary equity investing	Chapters 6-7	
-	Oct. 13-18	Midterm Recess (No Class)	-	Oct. 13-18
7	Oct. 21/22/27	Equity strategies: Short bias, quant equity	Chapters 8-9	PS2 Assigned (Oct. 27)
8	Oct. 28/29 Nov. 3	Equity strategies: Quant equity, continued	Chapters 9	
9	Nov. 4/5/10	Macro strategies: Asset allocation and global macro investing	Chapters 10-11	PS2 Due (Nov. 10 midnight)
10	Nov. 11/12/17	Arbitrage strategies: Fixed income arbitrage	Chapter 14	
11	Nov. 18/19/24	Exam 2 (No Class, Take-Home, on A2L)	Week 6-10	Nov. 22
12	Nov. 25/26 Dec. 1	Crypto and/or Generative AI, Group Report Review	TBA	
13	Dec. 5	Group Report Due		