

**F772
Financial Economics II
Fall 2022 Course Outline**

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

COURSE OBJECTIVE

This course goes beyond the coverage of Financial Economics I (F771) course to include a variety of topics such as continuous-time asset pricing models, evolutionary foundation of equilibrium models, asset pricing models with psychological biases and term structure of interest rate models. The objective of the course is to equip students with the adequate analytical skills to conduct their research in the field of financial economics.

INSTRUCTOR AND CONTACT INFORMATION

Dr. Guo Ying Luo
Instructor

Office: DSB 307
Tel: (905) 525-9140 x 23983
Office hours: by appointment

COURSE DESCRIPTION

The course is designed for second-year finance Ph.D. students. It starts with a brief introduction to diffusion process and stochastic calculus. Then it discusses the Black-Scholes model, the application of no-arbitrage pricing and continuous-time equilibrium asset pricing models. This course also covers evolutionary justification of a variety of equilibria with irrational market participants, the impact of psychological biases and private information on asset pricing and term structure of interest rate models.

LEARNING OUTCOMES

Upon completion of this course, students will be able to:

- Model asset returns by using continuous-time stochastic process.
- Conduct no-arbitrage asset pricing
- Model asset returns with jump diffusion process
- Appreciate the equilibrium concepts used in the field
- Understand a variety of analytic models in the field

COURSE MATERIALS AND READINGS

1. *Theory of Asset Pricing* (2008) by George Pennacchi, Pearson Publisher.
2. **Evolutionary Foundations of Equilibria in Irrational Markets**, by Guo Ying Luo, Springer Publisher, Series in Studies in Economic Theory, 2012.
3. **Asset Price Response to New Information: The Effects of Conservatism Bias and Representativeness Heuristic**, by Guo Ying Luo, Springer Publisher, Springer Briefs in Finance, 2014.

EVALUATION

Presentation 1	8%
Report 1	17%
Final Exam	50%
Presentation 2	8%
Report 2	17%
Total	100%

Conversion

At the end of the course your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme.

Grade	Points	Equivalent Percentages
A+	12	90 – 100
A	11	85 – 89
A-	10	80 – 84
B+	9	77 – 79
B	8	73 – 76
B-	7	70 – 72
F	0	69 and under

Participation

This includes attending lectures, being well prepared for classes, and presentations (as required).

Mid-term and Final Exam

Mid-term and final exam are cumulative. Both exams will be timed.

Please review the Graduate Examinations Policy:

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

What To Do When You Have Questions/Comments

If you have any question related to the topics that we cover in class, please feel free to talk to me in class. You can also send me an e-mail and I will attempt to respond to it within 48 hours. In case you have any comments and/or concerns about the course, I hope that you will not hesitate to let me know.

Please note that it is the school's policy that students who wish to correspond with instructors 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.

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, 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

MISSED ACADEMIC WORK

Late assignments will not be accepted. No extensions are available except under extraordinary circumstances. Please discuss any extenuating situation with your instructor at the earliest possible opportunity.

COURSES WITH AN ON-LINE ELEMENT

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course.

www.degroote.mcmaster.ca

The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

ONLINE PROCTORING

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

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.

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 RISO accommodation should submit their request, including the dates/times needing to be accommodated and the courses which will be impacted, to their Program Office normally within 10 working days of the beginning of term. 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.

POTENTIAL MODIFICATION 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.

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, A2L and/or McMaster email.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrolment in BUS F772 will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be announced during lecture. **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.

TENTATIVE COURSE SCHEDULE

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The following topics will be covered in this course:

- 1. Essentials of Diffusion Processes and Ito's Lemma**
- 2. Dynamic Hedging and PDE valuation**
- 3. Arbitrage, Martingales and Pricing Kernels**
- 4. Mixing diffusion and jump processes**
- 5. Continuous- Time Consumption and Portfolio Choice**
- 6. Equilibrium Asset Returns**
- 7. Time-Inseparable Utility**
- 8. Evolutionary foundation of equilibrium models**
- 9. Asset pricing models with psychological biases**
- 10. Interest rate models**