

Business F770
Financial Economics and Quantitative Methods
Fall 2025 Course Outline

Finance and Business Economics
DeGroote School of Business
McMaster University

COURSE OBJECTIVE

This course provides a broad overview of the theory and methodology of financial economics. The aim is to equip students with good finance foundation so that they are ready for subsequent, more advanced courses. Topics to be covered include decisions making under uncertainty, portfolio theory, asset-pricing models, bond pricing, capital structure, dividend policy, and derivative securities. In addition, the course encourages students to explore research topics that they want to pursue in their dissertation.

INSTRUCTOR AND CONTACT INFORMATION

Narat Charupat

E-mail: charupat@mcmaster.ca

Class Time: Wednesday 14:30 – 17:30

COURSE ELEMENTS

Credit Value: 3	Leadership: No	IT skills: No	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: No	Final Exam: No	Guest speaker(s): No



COURSE DESCRIPTION

This course explores the theoretical and conceptual foundations of finance. Among the theories, upon which modern finance is built are utility theory, stochastic dominance, state preference theory, mean-variance portfolio theory, the capital asset pricing model, the arbitrage pricing theory, term structure of interest rates and bond pricing, Modigliani-Miller and information theories of capital structure, risk sharing theories, and principal-agent theories.

LEARNING OUTCOMES

Upon completion of this course, students will possess:

- A good intuition of various finance concepts and methodologies
- Good knowledge of the literature on the possible topics that they may explore in their dissertations

REQUIRED COURSE MATERIALS AND READINGS

There is no textbook for this course. The course relies on several sources, including the lecture notes by Prof. Clarence Kwan (hereafter referred to as the "notes"). The notes are not intended for general distributions. A password-protected version of the notes will be provided to the students. It is each student's responsibility not to distribute the file to others.

If further descriptions, clarifications, and/or explanations of some materials covered in the notes – especially those involving mathematical and statistical topics, as well as institutional procedures and practices – are needed, students are encouraged to consult peer-reviewed journal articles (accessible electronically through McMaster Library), and reliable online resources, such as Wikipedia and Investopedia. However, as the quality of online information cannot be held to the same standard as that of peer-reviewed publications, caution is needed when assessing the credibility of any online materials.

The materials in this course also draw on a (now out-of-print) textbook called *Financial Theory and Corporate Policy, Fourth Edition*, (2005) by T.E. Copeland, J.F. Weston, and K. Shastri.

EVALUATION

Your final grade will be calculated as follows:

Components and Weights

Assignment #1	10%
Assignment #2	10%
Literate Review – Term Paper and Presentation (see Note)	15%
Midterm Exam	30%
Final Exam	35%
Total	100%

Note: The term paper will be on a research topic that each student is interested in and may continue to explore in his/her dissertation. The paper will be, at maximum, 25 pages long (1.5 spacing), not including a bibliography. It is due on Friday November 28. The presentations of the term papers will be held in class in the last week of the course.

Grade Conversion

The minimum passing grade for a graduate student in any course taken is a B-. At the end of the course your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme:

LETTER GRADE	PERCENT	POINTS
A+	90-100	12
A	85-89	11
A-	80-84	10
B+	75-79	9
B	70-74	8
B-	60-69	7
F	00-59	0



COMMUNICATION AND FEEDBACK

Students who wish to correspond with instructors or other 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 Program Administrator.

Students who have concerns about the course content, evaluation methods, or delivery should first reach out to the course instructor. If your concern remains unresolved after speaking with the instructor, you may then reach out to the relevant Area Chair for further consideration.

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

Students are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Such behaviour includes:

- following the expectations articulated by instructors for referencing sources of information and for group work;
- asking for clarification of expectations as necessary;
- identifying testing situations that may allow copying;
- preventing their work from being used by others (e.g., protecting access to computer files); and
- adhering to the principles of academic integrity when conducting and reporting research.

AUTHENTICITY/PLAGIARISM DETECTION

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software.

All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). For more details about McMaster's use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

COURSES WITH AN ONLINE ELEMENT

All courses use some online 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.

Students may be required to use the Respondus LockDown Browser and Respondus Monitor. The Respondus LockDown Browser is a downloadable program that allows a student to take an Avenue to Learn quiz in a secure environment. Quizzes can be set to use LockDown Browser or LockDown Browser.

For more details about McMaster's use of Respondus Lockdown Browser please go to <https://avenuehelp.mcmaster.ca/exec/respondus-lockdown-browser-and-respondus-monitor/>

The available information is dependent on the technology used. Continuation in a course that uses online 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.



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, Teams, 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.

ATTENDANCE

Arriving late or missing class disrupts the learning experience for both you and your peers. Punctuality and attendance are crucial to maintaining a respectful, professional and productive environment for everyone, including our faculty.

MISSED ACADEMIC WORK

Missed Tests / Assignments/ Class Participation

Please do not use the online [McMaster Student Absence Form \(MSAF\)](#) as this is for Undergraduate students only. The PhD program will not accept an MSAF.

For scheduled courses where the end date is known and aligns to sessional dates, a grade must be supplied by the end of the course. Under exceptional circumstances a course instructor may approve an extension for the student for the completion of work in a course but must assign an Incomplete grade (INC) at the end of the course. Normally this extension is in the range of a few weeks. A student who receives an incomplete grade must complete the work as soon as possible, and in any case early enough to allow the instructor to report the



grade by the sessional deadline noted as 'Final Date to Submit Results of Incomplete Grades'. If the INC grade is not cleared by the deadline, normally an F grade will be entered.

If a student is approved for an extension, they and instructors should make arrangements and submit an Incomplete (INC) Grade Memo to busphd@mcmaster.ca. If the student is not able to complete their course requirements by the INC deadline, they should submit a [Request for Extension](#) and be specific regarding the new deadline.

Missing Grade Memo is required if instructors are unable to submit any grades via Mosaic. The instructor must submit a Missing Grade Memo to busphd@mcmaster.ca.

Reasons for Incomplete course work can include:

- Health-related or extenuating circumstances
- Representing the University at an academic or varsity event
- Religious obligations
- Conflicts between two (or more) overlapping scheduled assignments.

Failing a Course

Failure a course is reviewed by the appropriate Faculty Committee on Graduate Admissions and Study or the Associate Dean Graduate Studies in the Faculty. The Faculty Committee on Graduate Admissions and Study or the Associate Dean Graduate Studies requests a departmental recommendation regarding the student, and this recommendation is given considerable weight. In the absence of a departmental recommendation to allow the student to continue, the student will be required to withdraw. Those allowed to remain in the program must either repeat or replace the failed course or milestone, per the decision of the Faculty Committee on Graduate Admissions and Study. A failing grade in a Certificate, Diploma, Master's or Doctoral course remains on the transcript. Students who fail a second course or milestone will not normally be allowed to continue in the program.

ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

<http://sas.mcmaster.ca>

Process for Students

- Students must activate their accommodation(s) (e.g., extra-time, memory aid, etc.) for each upcoming test, assignment, or exam, at least two weeks in advance. Students can do this by emailing their Instructor and the PhD Program Administrator (busphd@mcmaster.ca). If a student cannot meet this deadline, they should contact to discuss alternative arrangements. The program is committed to exploring flexibilities where possible to support students.
- Students will leverage the accommodation (e.g., extra-time, memory aid, etc.), in a designated testing room. Rooms will be booked according to the student's SAS accommodation. Unless the accommodation states otherwise, students should expect that they will be writing in a room with other students. One or more invigilators will always be in the room. Students may also take their tests/exams at the SAS test centre on main campus.
- Following the request to activate the accommodation(s), busphd@mcmaster.ca will reach out to the student with their test, assignment, or exam details, including the date, time, and room number.

All policies and procedures, including restroom access, how extra-time is allocated for assessments under Universal Design, and the submission of memory aids in advance, are consistent with those of SAS on Main Campus. The only variance in procedure is communication around, and physical location of, assessment. There is not a dedicated testing space at RJC or DSB. Existing classrooms and lecture halls will be used for most testing. All SAS-approved accommodations will be honoured by our staff; however, core testing elements are not eliminated in alternative testing formats. Students should expect and plan for invigilation, incidental noise, and other potential distractions.

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 the SEAO (Student Experience Academic Office) **normally within 10 working days** of the beginning of term in which they anticipate a need for accommodation. 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 and university reserve the right to modify elements of the course during the term. The university may change 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.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of PhD XXXX 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.



ARTIFICIAL INTELLIGENCE

This is where you include your statement on artificial intelligence and its use in your class. Can refer to this page for additional information and guidelines: [Generative Artificial Intelligence - Academic Excellence - Office of the Provost \(mcmaster.ca\)](https://www.mcmaster.ca/provost/academic-excellence/generative-artificial-intelligence)

TOPICS TO BE COVERED

1. Risk preferences; Expected utility; Common utility functions and their properties; Risk premium; Certainty equivalent;
2. State-preference framework; Pure securities; Complete vs. incomplete markets; No-arbitrage condition; Stochastic discount factors
3. Modern portfolio theory; Mean-variance framework
4. CAPM; APT; Multi-factor pricing models
5. Efficient market hypothesis
6. Term structure of Interest rates; Bond pricing; Yields; Duration; Convexity
7. Capital structure
8. Dividend policy; Stock buyback
9. Agency costs and governance
10. Mergers and acquisitions
11. Derivatives; Forward contract; Futures contract; Options; Swaps