



Online Template PhD 2025-26

**BUS F772
Financial Economics II
Fall 2025 Course Outline**

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

COURSE OBJECTIVE

This course extends Financial Economics I (F771) to include continuous-time asset pricing models and approaches. The objective of the course is to equip students with the necessary analytical capabilities to utilize these models and approaches in the valuation of derivative securities, interest rate instruments, and other securities in general.

INSTRUCTOR AND CONTACT INFORMATION

Fri 2:30 – 5:30 P.M.
Yoontae Jeon
Instructor
yoontae.jeon@mcmaster.ca
Office: DSB 310
Class Location: Check Mosaic

COURSE ELEMENTS

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



Online Template PhD 2025-26

COURSE DESCRIPTION

This course consists of two distinct parts. In the first part, we will focus on tools and research topics in continuous-time finance. It starts with an introduction to diffusion process and stochastic calculus. We will then consider the Black-Scholes model and the application of no-arbitrage pricing in a few derivative securities. We will also examine equilibrium pricing of assets under continuous time. Stochastic volatility models and jump diffusion processes and their implications will be studied.

In the second part, we will cover recent research topics in empirical asset pricing with focus on seminal papers in each area. Potential topics include ESG, macro-finance, institutional investors, and others. Students are expected to be equipped with up-to-date overview of popular research topics in empirical asset pricing by the end of the course. While the required mathematical background will be kept minimal, students are expected to be familiar with basic calculus, matrix algebra, and probability theory.

LEARNING OUTCOMES

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

- Understand the use of continuous-time process to model asset returns
- Appreciate the underlying economic assumptions of Black-Scholes option pricing model
- Model asset returns with stochastic volatility and jump diffusion process
- Understand structural model of default and its applications
- Have a comprehensive understanding of important and popular research topics in the empirical asset pricing
- Have acquired necessary skills to conduct original research in the empirical asset pricing

REQUIRED COURSE MATERIALS AND READINGS

There are no required textbooks for the course. We will mainly use published journal articles and lecture slides. For the first part of the course, students may find the following textbooks helpful.

- Financial Calculus: An introduction to derivative pricing by Martin Baxter and Andrew Rennie
- Stochastic Calculus for Finance I & II by Steven E. Shreve
- Theory of Asset Pricing by George Pennacchi

Online Template PhD 2025-26

EVALUATION

Components and Weights

- Class Participation: **10%**
- Research Idea Presentation I: **35%**
- Research Idea Presentation II: **35%**
- Assignments: **20%**

Students are expected to deliver two research idea presentations each from Part I and Part II of the course. It should build on the topic covered during the lecture and propose an original research idea. Students will be evaluated based on the originality, presentation, and the empirical analysis. In addition, there will be one or two assignments to be submitted by email.

Grade Conversion

Instructors have the discretion of marking individual components of a course with either a letter or numerical grading scheme but final course grades taken at McMaster can only be reported as either Pass/Fail or letter grades. When numerical grading is used in a course, the final course average with decimal place of 0.5 or greater should be rounded up before conversion to a letter grade. The minimum passing grade for a graduate student in any course taken is a B-, including undergraduate courses or courses taken off campus:

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



Online Template PhD 2025-26

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.

Online Template PhD 2025-26

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.

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



Online Template PhD 2025-26

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



Online Template PhD 2025-26

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



Online Template PhD 2025-26

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.



Online Template PhD 2025-26

ACKNOWLEDGEMENT OF COURSE POLICIES

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

Use of AI tools, such as ChatGPT, is allowed and recommended for this course. However, students should clearly indicate in all places where an AI tool was used to produce outcome.

Online Template PhD 2025-26

COURSE SCHEDULE

**BUS F772
Financial Economics II
Fall 2025 Course Schedule**

WEEK	DATE	TOPIC
PART I: TOPICS IN CONTINUOUS-TIME FINANCE		
1	Sep 12	Introduction & General Guideline to Finance Research
2	Sep 12	Introduction to Stochastic Calculus and the Itô Formula
3	Sep 26	Black-Scholes Option Pricing Model and No-Arbitrage Pricing
4	Oct 3	Martingales and Pricing Kernels
5	Oct 10	Stochastic Volatility Models and Jump-Diffusion Processes
PART II: TOPICS IN EMPIRICAL ASSET PRICING		
6	Oct 17	Textual Data in Asset Pricing
7	Oct 24	ESG in Asset Pricing
8	Nov 31	Macro-Finance in Asset Pricing
9	Nov 7	Low-Risk Anomalies
10	Nov 14	Institutional Investors
11	Nov 21	Political Finance in Asset Pricing
12	Nov 28	Student Research Idea Presentation from Part I
13	Dec 5	Student Research Idea Presentation from Part II