Commerce 3FD3
Financial Modeling
Fall 2026 Course Outline

Finance and Business Economics Area
DeGroote School of Business
McMaster University

INSTRUCTOR AND CONTACT INFORMATION

C01: Wed 8:30 – 11:20 **CO2: Tue 8:30 - 11:20**

Zohair Alam
Instructor
alamm59@mcmaster.ca
Office: DSB 405
Office Hours: By appointment

Hesam Nojavan
TA
nojavanh@mcmaster.ca

COURSE ELEMENTS

Credit Value:	3	Leadership:	No	IT skills:	Yes	Global view:	Yes
A2L:	Yes	Ethics:	No	Numeracy:	Yes	Written skills:	No
Participation:	Yes	Innovation:	Yes	Group work:	Yes	Oral skills:	No
Evidence-based:	Yes	Experiential:	No	Final Exam:	Yes	Guest speaker(s):	No

COURSE INFORMATION

Lectures: 3hr x 1/wk
Course Delivery Mode: In-person
Course Description: This three-credit elective undergraduate course introduces financial modelling with MS-Excel and Python. The main focus is on configuring and solving real-world applications in corporate finance and investments. By the end of this course, students will be able to use quantitative tools (such as spreadsheets and financial libraries/functions) to model problems on topics such as capital budgeting, firm valuation, portfolio management, and risk management.

Introduction to Finance (COMMERCE 2FA3 or IBH 2BB3) and registration in level III or above in any Honours Bachelor of Commerce or Engineering and Management program; or relevant minor is a prerequisite. Strong knowledge of statistics is highly recommended. Working knowledge of MS Excel is assumed, but no prior experience with Python is required.

Note: Non-Commerce students may enrol in specific upper-year Commerce courses if they have been accepted into a Specialized Minor offered by the Faculty of Business or can demonstrate that they are pursuing an interdisciplinary minor for which the specific Commerce courses are included.

MEETING DETAILS

C01: Meets from 8:30 a.m. to 11:20 a.m. every Wednesday

C02: Meets from 8:30 a.m. to 11:20 a.m. every Tuesday

The **first class** for each section will be:

C01: Wednesday, September 9, 2026

C02: Tuesday, September 8, 2026

Punctuality is the sign of a true professional and shows self-discipline and respect for others. Please make whatever arrangements are necessary to begin work at 8:30 a.m.

IMPORTANT LINKS

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

Course Learning Outcomes

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

- Develop a conceptual framework to solve financial problems.
- Design a financial model.
- Build a financial model using MS-Excel and Python.

Course Learning Goals

Upon successful completion of this course, students will learn and understand the following key concepts:

- Learn to use advanced techniques for analyzing financial data, for the purposes of managerial decision making.
- Learn to apply MS-Excel's various tools, including matrix multiplication and array functions, to build financial models.
- Learn the basics of programming in Python.

Use Python to build financial models.

Required Materials and Texts

Required:

Course materials are available on Avenue To Learn: http://avenue.mcmaster.ca/

The most relevant textbook for this course is the one authored by Benninga. Students may choose to purchase the current or previous editions of the book to supplement the material provided to them, although they are not required to. Most prior students have found the course material provided to them via Avenue to be sufficient to succeed in the course.

Benninga; Financial Modeling; Fourth (4th) Edition; The MIT Press, 2014. ISBN: 978-0262027281. The textbook is a Finance-focused modelling text, also useful in other finance courses, that cover practical examples in finance in Excel.
Current Price on Amazon: $157.14

Optional:

- Yves Hilpisch, Python for Finance: Analyze Big Financial Data, 2014. ISBN: 978-1491945285. The textbook is a hands-on guide that helps both developers and quantitative analysts get started with Python and guides you through the most important aspects of using Python for quantitative finance.
  - *Current Price on Amazon*: *$27.73*
- Rosenbaum, J., Pearl, J., Investment Banking, (Second Edition – University Edition) Wiley, 2013. ISBN: 978-1-118-47220-0. The textbook focuses on the primary valuation methodologies that are widely used in the industry.
  - *Current price on Amazon: $41.69*

CLASS FORMAT

This is an in-person 3-hour course. The class will consist of mini-lectures, in-class problem-solving (hands-on assignments both with MS-Excel, and Python), and lengthier discussion of the topics. There will be a short break part way through at a convenient time based on what we are working on. Please use this time to take care of personal needs of various kinds.

COURSE EVALUATION

The grade will be calculated as the weighted sum of students' marks for their four assignments, two take-home midterm exams, and a final exam. The weights and description of deliverables are as follows:

Deliverables	**Description**	**Weight**
Attendance	1% for every class attended (other than the ones in which students will write exams)	5%
Class Participation	1% for every "meaningful" contribution	10%
Assignments	Time value of money, stock and bond valuation, Python basics, risk-return,	20% (4 x 5%)

Midterm 1	Time Value of money, stock and bond valuation (Excel-based)	35%
Midterm 2	Risk-return, CAPM. Analysis in Excel and Python.	30%
Total		**100%**

COURSE DELIVERABLES

Attendance
Attendance is worth **5%** of the overall grade. To earn the full 5% of this component, a student must attend at least 5 classes, <u>other than the ones in which they will write exams</u>.

Class Participation
Students will earn 1% for every "meaningful contribution", up to a maximum of **10%**. Thus, to earn all 10% of this component, a student must contribute 10 times "meaningfully" over the course of a semester. What constitutes "meaningful" is at the instructor's discretion and may include responding thoughtfully to questions posed during lectures, asking thoughtful questions, or contributing relevant and substantive comments to class discussions.

Assignments
There are four assignments, each worth 5% of the overall grade. Thus, they are overall worth **20%** of the final grade. Details of each assignment will be provided a week before they are due. They will be closely related to the material discussed in the lectures. Students are required to submit their assignments <u>before the start of the class on the due date.</u> See course schedule for due dates for each section. Late submissions will not be accepted.

Midterm #1 – In-class exam
The first midterm is worth **35%** of the overall grade. This midterm will be <u>in-person</u> and computer based. Students will be responsible to ensure that MS-Excel work properly on their devices prior to the exam. The exam will commence at the scheduled start time of the class. Please refer to the course schedule for the specific start time of your section. Students may consult lecture material and/or other textbooks during the midterm. However, the use of <u>generative AI will not be permitted</u>.

The first midterm will focus on all topics discussed prior to mid-term recess: time value of money, stock and bond valuation. More details of the exam will be provided before mid-term recess.

Midterm #2 – In-class exam
The second midterm is worth **30%** of the overall grade. This midterm will be <u>in-person</u> and computer based. Students will be responsible to ensure that MS-Excel and Python work properly on their devices prior to the exam. The exam will commence at the scheduled start time of the class. Please refer to the course schedule for the specific start time of your section. Students may consult lecture material and/or other textbooks during the midterm. However, the use of <u>generative AI will not be permitted</u>.

The second midterm will focus on all topics discussed after mid-term recess: coding in python, risk-return tradeoffs and CAPM. More details of the exam will be provided a week before.

LATE ASSIGNMENTS

Assignments are provided well in advance. Students will have more than sufficient time to complete them on time. Thus, late submissions will not be accepted.

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.

Please start your email's subject line with "3FD3", so that I don't miss your communication.

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/

* Non-Commerce students must follow the Missed Course Work protocols outlined by their home faculty and Program Office.

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 are not permitted to use generative AI in this course. In alignment with McMaster academic integrity policy, it "shall be an offence knowingly to … submit academic work for assessment that was purchased or acquired from another source". This includes work created by generative AI tools. Also state in the policy is the following, "Contract Cheating is the act of "outsourcing of student work to third parties" (Lancaster & Clarke, 2016, p. 639) with or without payment." Using Generative AI tools is a form of contract cheating. Charges of academic dishonesty will be brought forward to the Office of Academic Integrity.

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.

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. Avenue to

Learn, 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 ON-LINE ELEMENT

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn, 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. 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.

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 enrolment in Commerce 3FD3 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 3FD3: Section C01
Financial Modeling
Fall 2026 Course Schedule

Week	Date	Topics	Readings	Due Dates
1	Wed Sep 9	Introduction to Financial Modeling & Time Value of Money	Chapters 31-35 Chapters 1-7	
2	Wed Sep 16	Time Value of Money	Chapters 1-7	
3	Wed Sep 23	Stock Valuation	Chapters 2,3,4,5,6	Assignment 1 (due before class begins)
4	Wed Sep 30	Stock Valuation	Chapters 2,3,4,5,6	
5	Wed Oct 7	Bond Valuation Python Libraries	Chapters 20 – 21 Teaching Notes	Assignment 2 (due before class begins)
	Wed Oct 14	**Mid-term recess**		
6	Wed Oct 21	**Midterm 1**		**Starts at 8:30 am sharp**
7	Wed Oct 28	Python Libraries Risk and Return	Teaching Notes Chapters 8-12	
8	Wed Nov 4	CAPM	Chapters 8-12	
9	Wed Nov 11	Python Libraries	Teaching Notes	Assignment 3 (due before class begins)
10	Wed Nov 18	Python Libraries	Teaching Notes	
11	Wed Nov 25	Extensions of CAPM WACC	Chapters 3, 28	Assignment 4 (due before class begins)
12	Wed Dec 2	**Midterm 2**		**Starts at 8:30 am sharp**
13	Wed Dec 9	Monte Carlo Simulation	Chapters 24 - 27	
* The topics covered in each session might be adjusted with the speed of class progress.				

COURSE SCHEDULE

Commerce 3FD3: Section C02
Financial Modeling
Fall 2026 Course Schedule

WEEK	DATE	TOPICS	READINGS	DUE DATES
1	Tue Sep 8	Introduction to Financial Modeling & Time Value of Money	Chapters 31-35 Chapters 1-7	
2	Tue Sep 15	Time Value of Money	Chapters 1-7	
3	Tue Sep 22	Stock Valuation	Chapters 2,3,4,5,6	Assignment 1 (due before class begins)
4	Tue Sep 29	Stock Valuation	Chapters 2,3,4,5,6	
5	Tue Oct 6	Bond Valuation Python Libraries	Chapters 20 – 21 Teaching Notes	Assignment 2 (due before class begins)
	Wed Oct 13	**Mid-term recess**		
6	Tue Oct 20	**Midterm 1**		**Starts at 8:30 am sharp**
7	Tue Oct 27	Python Libraries Risk and Return	Teaching Notes Chapters 8-12	
8	Tue Nov 3	CAPM	Chapters 8-12	
9	Tue Nov 10	Python Libraries	Teaching Notes	Assignment 3 (due before class begins)
10	Tue Nov 17	Python Libraries	Teaching Notes	
11	Tue Nov 24	Extensions of CAPM WACC	Chapters 3, 28	Assignment 4 (due before class begins)
12	Tue Dec 1	**Midterm 2**		**Starts at 8:30 am sharp**
13	Tue Dec 8	Monte Carlo Simulation	Chapters 24 - 27	
* The topics covered in each session might be adjusted with the speed of class progress.				