

**Finance 707
Financial Modelling
Summer 2021 Course Outline**

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

COURSE OBJECTIVE

This course introduces the basics of financial modelling. This requires some understanding of finance and a basic knowledge of MS Excel.

The course will examine the tools built into Excel and VBA and their use in financial modeling, with an emphasis on documentation and industry-best practices. The models used for this purpose include those covering financial statement forecasts, asset pricing, portfolio management, risk management, and other finance problems.

INSTRUCTOR AND CONTACT INFORMATION

C01: Fri 08:30–11:20
Martin Butcher
Instructor
butchm1@mcmaster.ca

CO2: Tue 19:00-22:00
Martin Butcher
Instructor
butchm1@mcmaster.ca

Tel: (905) 403-8286
Class Location: **Virtual**

Tel: (905) 403-8286
Class Location: **Virtual**

COURSE ELEMENTS

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

COURSE DESCRIPTION

Financial modelling involves the creation of tools that someone, other than the writer, can use to answer “what if” questions in finance. The course will examine the tools built into MS Excel and VBA and their use in financial modelling, with an emphasis on documentation and industry best practices. The tools employed will include use of an introductory programming language, and the integration of Excel with FinTech.

A working knowledge of MS Excel is assumed, but no prior experience with VBA is required.

LEARNING OUTCOMES

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

- Identify the key finance and accounting terms and concepts used in financial models.
 - Apply best practices and efficiency tools for general-purpose spreadsheet modeling.
 - Determine the key input variables to a range of financial models.
 - Integrate and link key financial statements and ratios into a financial model.
 - Perform key sensitivity and scenario analyses under a range of assumptions.
 - Learn to document and test a financial model.
 - Learn to work with and use a range of external data with a spreadsheet model.
 - Learn to program a financial model using Visual Basic for Applications (VBA)
-

COURSE MATERIALS AND READINGS

Course Materials are available on Avenue To Learn

Textbooks:

Benninga; Financial Modeling; Fourth Edition; The MIT Press, 2014. ISBN: 978-0262027281. Comprehensive finance-focused text, also useful in other finance courses

Walkenbach; Excel 2016 Bible; First Edition; Wiley, 2015. ISBN: 978-1119067511. Traditional-style manual for Excel, helpful in gaining understanding of broader Excel usage

COURSE OVERVIEW AND ASSESSMENT

Individual learning in this course results from in-class discussions, problem solving, and lab work. The balance of the individual learning results from lectures on specific topics, student research, and a group project centred on a financial model.

Your final grade will be calculated as follows:

Weekly Engagement Questions	20%
Test 1: (Week 6)	25%
Test 2: (Week 12)	25%
Group Project: (Week 13)	30%
TOTAL	100%

COURSE DELIVERABLES

Weekly Engagement (20%)

10 weeks of asynchronous chat question and response at 2% per week. A detailed grading rubric will be posted on Avenue to Learn in Week 01.

Test 1 (25%) – Week 6

On-line test on material covered in the first six weeks of the course. Details will be posted on Avenue to Learn in Week 05.

Test 2 (25%) – Week 12

On-line test on material covered in the last six weeks of the course. Details will be posted on Avenue to Learn in Week 11.

Group Project (30%) Innovation Project – Week 13

Group project details will be posted on Avenue to Learn in Week 03.

COMMUNICATION AND FEEDBACK

Students who wish to correspond with instructors or class mates 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.

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behavior 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 behavior 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](https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/), located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

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.

COURSES WITH AN ONLINE ELEMENT

Students should be aware that, when they access the electronic components of a course, 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.

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 behavior's 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.

MISSED ACADEMIC WORK

Where students miss a regularly scheduled mid-term or class participation for legitimate reasons as determined by the Student Experience – Academic (MBA) office, the weight for that test/participation will be distributed across other evaluative components of the course at the discretion of the instructor. Documentation explaining such an absence must be provided to the Student Experience – Academic (MBA) office within five (5) working days upon return to school.

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.

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 (e.g., severe weather, labor 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 Finance 707 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

Finance 707 - Financial Modelling Summer 2021 Course Schedule

Meeting	Week of	Topics	Excel
1	May 03	Introduction Intro to Financial Modelling	
2	May 10	Financial Statement Modelling I Forecasting financial statements using spreadsheets	Excel functions / tools
3	May 17	Financial Statement Modelling II Integrating financial statement worksheets, completing valuations.	Excel functions / tools
4	May 24	Portfolio Modelling Investment portfolios, betas, variances, performance measurement	Data tables, arrays, pivot tables Matrix operations
5	May 31	Forecasting and Optimization Macro forecasting, optimization techniques, predictive analytics	Solver, Analysis Toolkit, Regression, Scenario analysis
6	Jun 07	TEST 1	
7	Jun 14	Financial Software Integration Use with Bloomberg and third-party software	Using Bloomberg Terminals
8	Jun 21	VBA / Programming I Intro to VBA / programming	VBA, macros, custom functions
9	Jun 28	VBA / Programming II Working with custom functions	VBA, advanced loops
10	Jul 05	VBA / Programming III Additional programming	User interfaces, additional VBA programming
11	Jul 12	FinTech Integration	
12	Jul 19	TEST 2	
13	Jul 26	GROUP PROJECT	