



**COMMERCE 3FD3
Financial Modeling
Fall 2020 Course Outline**

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

COURSE DESCRIPTION

What is the difference between making a purpose-built spread sheet and financial modeling? Financial modeling is much more flexible and can be easily modified to solve a wide array of problems. This course will examine the tools built into Excel and VBA and their use in financial modeling. A basic knowledge of Excel is assumed with no prior experience with VBA required.

INSTRUCTOR AND CLASS INFORMATION

Virtual Classroom

All times referenced in this document are Eastern.

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Instructor

Tel: 905-525-9140 Ext 20559

Office Hours: Before or after class, or by appointment

COURSE ELEMENTS

Credit Value: 3	Leadership: Yes	IT skills: Yes	Global view: Yes
Avenue: Yes	Ethics: No	Numeracy: Yes	Written skills: Yes
Participation: Yes	Innovation: Yes	Group Work: Yes	Oral skills: Yes

COURSE PREREQUISITES AND COMPLEMENTS

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

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.

COURSE OVERVIEW

This course introduces the basics of financial modelling. It is offered as an upper-year course because of the 2FA3 prerequisite. This setup requires an understanding of finance and a basic knowledge of Excel. We will build on this knowledge to develop a more complete understanding of what makes for a good financial model, and how to go about building.

LEARNING OUTCOMES

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

- Design and layout a financial model.
- Decide on which variables are independent and how to vary them.
- Become familiar with Excel and VBA, enough to be viewed as the "resident expert" in many situations.

REQUIRED COURSE MATERIALS AND READINGS

Course content and class communication available on Avenue:

- <http://avenue.mcmaster.ca>

OPTIONAL COURSE MATERIALS AND READINGS

Benninga; Financial Modeling; *Fourth (4th) Edition*; The MIT Press, 2014:

- ISBN: 978-0262027281
- Finance-focused modelling text, also useful in other finance courses

Walkenbach; Excel 2016 Bible; *First (1st) Edition*; Wiley, 2015:

- ISBN: 978-1119067511
- Traditional-style manual for Excel, without any particular finance focus
- Helpful in gaining understanding of broader Excel usage

EVALUATION

Individual learning in this course results from model building, problem solving, and lab work. Team learning focus of this course is on two assignments and an applied group project centred on a financial model.

The final grade will be calculated as follows:

Components and Weights

Term Tests	Written online in weeks 4 and 11 (individual)	2 x 25%
Spreadsheet Assignments	Due online during the term (group)	2 x 10%
Group Project	Due online at the end of the term (group)	30%
Total		100%

Term Tests

Two (2) term tests – *open-book, open-notes* tests – will be written during the term. Specific dates and times will be announced after a review by the Registrar’s Office.

A student *missing a Term Test* is required to contact the ‘Student Experience – Academic Office’ and obtain an official approval of relief if he or she wishes to avoid getting a zero (0) grade for the test. If ‘Student Experience – Academic Office’ adjudicates that relief be provided without the requirement of an alternate test, the student’s grade for the missed test will be calculated based on the scheme outlined in the *Missed Tests for Accommodated Absences* document available online.

Spreadsheet Assignments

There are two (2) *Spreadsheet Assignments* in the course – completed in groups, submitted online, and focused on the concepts introduced in the course – and referred to as **Assignment One** and **Assignment Two**. See the course schedule for specific dates and times.

Students will form groups for this component. Each student group will also complete the **Group Project** as described elsewhere in this document. *The group members will be assigned individual grades relative to the group grade based on the peer assessments completed towards the end of the course.*

Group Project

Students will form groups for this component. Each student group will also complete the **Spreadsheet Assignments** as described elsewhere in this document. *The group members will be assigned individual grades relative to the group grade based on the peer assessments completed towards the end of the course.*

The **Group Project** is **due at the end of the term**. The project will entail building and documenting a real-life financial model using the concepts covered in the course.

COURSES WITH AN ONLINE ELEMENT

In this course, we may use online elements (e.g. e-mail, A2L, web pages, 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

In this course, we 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 A2L, 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.

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, A2L and/or McMaster email.

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.

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* 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

REQUESTING RELIEF FOR MISSED ACADEMIC WORK

Students may request relief from a regularly scheduled midterm, test, assignment or other course components. Please refer to the policy and procedure on the DeGroote website at the link below:

<http://ug.degroote.mcmaster.ca/forms-and-resources/missed-course-work-policy/>

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 Faculty Office normally within 10 days of the beginning of term 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.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrolment in this course 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.

RESEARCH DATA

Any research data obtained by a student from publicly available sources for the purposes of completing term work (including data used in assignments, projects, and tests) are the joint property of the student, the instructor, and the university. All parties are free to use the research data subject to the original copyright of such data. Students hereby agree not to use in their term work any proprietary data or data subject to copyright protection without the prior written approvals of the instructor and the owner of any such copyright.

POTENTIAL MODIFICATIONS 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.

COURSE SCHEDULE

Wk.	STARTS	CONTENT	EXCEL TOPIC
1	Tue, Sep 8	Introduction Intro to Financial Modelling	-
2	Mon, Sep 14	Financial Statement Modelling I Forecasting financial statements using spreadsheets	<ul style="list-style-type: none"> • Various Excel functions / tools
3	Mon, Sep 21	Financial Statement Modelling II Integrating financial statement worksheets	<ul style="list-style-type: none"> • Various Excel functions / tools
4	Mon, Sep 28	Financial Statement Modelling III Financial statement modules, completing valuations	<ul style="list-style-type: none"> • Various Excel functions / tools
-	Sat, Oct 3	Term Test 1 (Written Online at 9.30 AM)	
5	Mon, Oct 5	Portfolio Modelling Investment portfolios, betas, variances, performance measurement	<ul style="list-style-type: none"> • Data tables and arrays • Lookup operations
-	Oct 12 – 18	Midterm Recess (No Classes)	
6	Mon, Oct 19	Forecasting and Optimization Macro forecasting, optimization techniques, predictive analytics	<ul style="list-style-type: none"> • Solver, Analysis Toolkit, Regression, Scenario analysis
-	Sun, Oct 25	Assignment One (Due Online by 11.59 PM Eastern Time)	
7	Mon, Oct 26	Working with External Data Integration with online data sources and databases	<ul style="list-style-type: none"> • PowerQuery, Advanced Lookups, Aggregation Tools
8	Mon, Nov 2	VBA / Programming I Intro to VBA / programming	<ul style="list-style-type: none"> • VBA, macros, custom functions
9	Mon, Nov 9	VBA / Programming II Working with custom functions	<ul style="list-style-type: none"> • VBA, advanced loops

Wk.	STARTS	CONTENT	EXCEL TOPIC
-	Sun, Nov 15	Assignment Two (Due Online by 11.59 PM Eastern Time)	
10	Mon, Nov 16	VBA / Programming III Additional programming	<ul style="list-style-type: none"> User interfaces, additional VBA programming
-	Sun, Nov 22	Project Proposal (Due Online by 11.59 PM Eastern Time)	
11	Mon, Nov 23	VBA / Programming IV Other programming languages and big data tools	<ul style="list-style-type: none"> (TBA)
-	Sat, Nov 28	Term Test 2 (Written Online at 9.30 AM)	
12 + 13	Nov 30 Onwards	<i>Review + Project Questions/Help</i>	-
-	Wed, Dec 9	Group Project (Due Online by 11.00 AM Eastern Time)	