

**MBA F733
Financial Risk Management
Fall 2022 Course Outline**

**Finance
DeGroote School of Business
McMaster University**

COURSE OBJECTIVE

The objective of the course is to provide an introduction as well as an in-depth understanding of issues in financial risk management. The focus is on the measurement of risk and the usage of related instruments to hedge the risk.

INSTRUCTOR AND CONTACT INFORMATION

Section 1: Tue 11:30 – 1420
Alicia Damley, CFA, CPA, CA, MBA
Instructor
damleya@mcmaster.ca
Office Hours: By Appointment
Class Location: RJC xx

Student TA
TA
TAsMACID@mcmaster.ca
Office:
Office Hours: TBA

Course website: Avenue 2 Learn

We are here to help you succeed!

Both our course TA and I are here to help you navigate this course successfully!

Outside of class, it is easiest to connect via email. We can address a question quickly via email or setup a time to speak directly. I endeavor to respond to emails within 48 hours. For our mutual benefit and protection, please send all emails from your Mac id. If I have not responded to your inquiry within 48 hours, please re-send it in case it has been lost between our in-boxes.

COURSE ELEMENTS

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

COURSE DESCRIPTION

The course begins with a few preliminary risk management and financial engineering concepts that underpin much of the material of the course. The coverage includes a brief historical review of the risks that banks face and of the risk regulations in the banking sector.

The course then covers an overview of various market risk analytical techniques, including sensitivity analysis and stress testing. A fair amount of focus is placed on “internal models approaches” for capital adequacy and the use of “Value at risk” (VaR) as a metric for regulatory reporting. The pros and cons of various VaR approaches are described.

The focus of the course then shifts for a couple of lectures to counterparty credit risk (CCR) analytics and the emergence of a range of valuation adjustments (xVA's) when pricing over the counter derivatives.

The credit risk crisis of 2007 serves as a turning point for risk management, representing a shift in regulatory philosophy from an objective of converging regulatory capital with economic capital to one of a divergence. The background behind this shift in focus and the implications for risk management will be discussed in detail for the remaining sections of the course.

As such, the course then turns to some of the risk categories that were underappreciated prior to the crisis, primarily focusing on liquidity risk and model risk. The course concludes with a discussion of economic capital.

LEARNING OUTCOMES

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

- Learn and compare the advantages and disadvantages of several methodologies for the measurement of various types of risk, including market, interest rate, credit, operational, liquidity and model risk
 - Integrate the methodologies into an overall framework for enterprise risk management
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REQUIRED COURSE MATERIALS AND READINGS

Avenue registration for course content, readings and case materials

➤ <http://avenue.mcmaster.ca>

Required textbook:

Risk Management and Financial Institutions 5th Edition, John Hull, 2018

Campus Bookstore link:

https://campusstore.mcmaster.ca/cgi-mcm/ws/txsub.pl?wsTERMG1=224&wsTERMDESC1=Fall+2022&wsDEPTG1=BUSADMIN&wsDEPTDESC1=BUSADMIN+-+Business+Administration+Grad&wsCOURSEG1=F733&wsSECTIONG1=DAY+C01&programG1=McMaster+Undergrad+and+Graduate&crit_cnt=1

The textbook is available for purchase at McMaster's bookstore. Other assigned and articles can be accessed electronically, for registered students, from McMaster's library website.

EVALUATION

Learning in this course results primarily from in-class discussion and participation of comprehensive business cases as well as out-of-class analysis. The balance of the learning results from the lectures on strategic concepts, from related readings, and from researching your presentations, cases, assignments, simulation decisions and projects. All work will be evaluated on an individual basis except in certain cases where group work is expected. In these cases, group members will share the same grade adjusted by peer evaluation. Your final grade will be calculated as follows:

Components and Weights

| | | |
|---|-----------------------------------|-------------|
| Case Analysis | See separate document for details | 20% |
| Bank analysis & presentation | See separate document for details | 30% |
| Mid-Term | Details to be provided | 50% |
| Total | | 100% |

NOTE: The use of a McMaster standard calculator is allowed during examinations in this course. See McMaster calculator policy at the following URL:

www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf

Grade Conversion

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 |

Course Deliverables

Case Analysis

The case analysis assignment will be completed in groups of up to 5 students. Each group will select a case from the list provided. Allocation will be done on a first-come first-served basis. Details of the case analysis are found in a separate document on Avenue.

Students are strongly encouraged to explore the data and trading related resources available in-person and/or virtually in the DSB's Allen H. Gould Trading Floor.

Bank Analysis & Presentation

This analysis and in-class presentation will be completed in groups of up to 5 students. Each group will analysis a bank's capital and risk position from the list provided. Allocation will be done on a first-come, first-served basis. Details of the effort is found in a separate document on Avenue.

Mid-Term Exam

The mid-term exam can include multiple choice and/or written answers.

The mid-term exam is **open-book** and will cover material from the textbook, any assigned readings, lectures and class discussion.

End of textbook chapter questions will be provided for student review and self-confirmation of mastery of material learning outcomes. These will be made available as part of each lecture's material on

Avenue. These questions are also intended as foundation for the group project company analysis and provide a perspective on written questions on the mid-term exam.

COMMUNICATION AND FEEDBACK

Students that are uncomfortable in directly approaching an instructor regarding a course concern may send a confidential and anonymous email to the respective Area Chair or Associate Dean:

<http://mbastudent.degroote.mcmaster.ca/contact/anonymous/>

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 Administrative Assistant.

Instructors are encouraged to conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery. Instructors should provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

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

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

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 ON-LINE ELEMENT

Some courses may use on-line 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.

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.

ON-LINE 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.

MISSED ACADEMIC WORK

Missed Mid-Term Examinations / Tests / Class Participation

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

When students miss regularly scheduled term work which contributes 10% or more to the final grade, for legitimate reasons as determined by the Student Experience – Academic Office (SEAO), the activity necessary to compensate for the missed work will be determined by the course instructor. The compensatory activities assigned will vary with the nature of the course and the missed requirement. They include, but are not restricted to, an alternative assignment, a rescheduled midterm exam, or re-weighting the marks for the missed component to other mark components. Documentation explaining such missed work must be provided to the SEAO within five (5) working days of the scheduled date for completion of the work.

Acceptable reasons for missed work, along with the [Petition for Missed Term Work](#) and the [MBA Student McMaster University Student Health Certificate](#), can be found on the DeGroote MBA Student website (mbastudent.degroote.mcmaster.ca). Please direct any questions about acceptable documentation to the MBA Academic Advisors (askmba@mcmaster.ca).

University policy states that a student may submit a maximum of three (3) [Petition for Missed Term Work](#) per academic year, after which the student must meet with the Director of the program.

If term work is missed without an approved reason, students will receive a grade of zero (0) for that component.

Missed Final Examinations

Students must be available for the duration of the posted exam period regardless of their personal exam schedule. This is to ensure student availability throughout the entire exam period in the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm policy, etc.). A student who misses a final examination without valid reason will receive a mark of 0 on the examination.

Students who have missed a final exam for a valid reason can apply to the SEAO to write a deferred examination by submitting an Application for Deferring a Final Exam with supporting documentation. The application must be made within five days of the scheduled exam date or the application may be denied.

The Application for Deferring a Final Exam and the MBA Student McMaster University Student Health Certificate can be found on the DeGroote MBA Current Student website (mbastudent.degroote.mcmaster.ca)

Deferred examination privileges, if granted, are normally satisfied during the examination period at the end of the following semester. In select cases, the deferred examination may be written at a time facilitated by the SEAO and agreed to by the course instructor.

Requests for a second deferral or rescheduling of a deferred examination will not be considered.

Failure to write an approved deferred examination at the pre-scheduled time will result in a zero (0) mark for that examination, except in the case of exceptional circumstances where documentation has been provided and approved. Upon approval, no credit will be given for the course, and the notation N.C. (no credit) will be placed on the student's transcript.

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>

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. 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.

RESEARCH USING HUMAN SUBJECTS

ONLY IF APPLICABLE

Research involving human participants is premised on a fundamental moral commitment to advancing human welfare, knowledge, and understanding. As a research intensive institution, McMaster University shares this commitment in its promotion of responsible research. The fundamental imperative of research involving human participation is respect for human dignity and well-being. To

this end, the University endorses the ethical principles cited in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans:

<http://www.pre.ethics.gc.ca>

McMaster University has mandated its Research Ethics Boards to ensure that all research investigations involving human participants are in compliance with the Tri-Council Policy Statement. The University is committed, through its Research Ethics Boards, to assisting the research community in identifying and addressing ethical issues inherent in research, recognizing that all members of the University share a commitment to maintaining the highest possible standards in research involving humans.

If you are conducting original research, it is vital that you behave in an ethical manner. For example, everyone you speak to must be made aware of your reasons for eliciting their responses and consent to providing information. Furthermore, you must ensure everyone understands that participation is entirely voluntary. Please refer to the following website for more information about McMaster University's research ethics guidelines:

<http://reo.mcmaster.ca/>

Organizations that you are working with are likely to prefer that some information be treated as confidential. Ensure that you clarify the status of all information that you receive from your client. You **MUST** respect this request and cannot present this information in class or communicate it in any form, nor can you discuss it outside your group. Furthermore, you must continue to respect this confidentiality even after the course is over.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of MBA F733 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

MBA F733 Financial Risk Management Fall 2022 Course Schedule

| WEEK | WEEK OF | TOPIC | TEXTBOOK |
|-------------|----------------|---|-----------------|
| 1 | Sep 13 | Class Outline, Schedule, Participation, Group selection Introduction; Trading in Financial Markets | 1, 5 |
| 2 | Sep 20 | Market Risk Overview; Basel regulatory framework | 7, 15 |
| 3 | Sep 27 | How Traders Manage their Risks; Interest Rate Risk (Review as required Chp 10: Volatility) | 8, 9 |
| 4 | Oct 4 | Value at Risk & Expected Shortfall Historical Simulation & Extreme Value Theory (EVT) | 12, 13 |
| 5 | Oct 11 | Extreme Value Theory (EVT) Model-Building Approach | 13, 14 |
| 6 | Oct 18 | Virtual lecture via Zoom (see A2L for link details) Scenario Analysis and Stress Testing Case #1 due at beginning of lecture via Avenue | 22 |
| 7 | Oct 25 | CVA and DVA | 20 |
| 8 | Nov 1 | Credit Value at Risk | 21 |
| 9 | Nov 8 | The Credit Crisis of 2007 Post Global Fin Crisis Basel regulations | 6, 16, 17 |
| 10 | Nov 15 | Liquidity Risk Model Risk Management | 24, 25 |

| WEEK | WEEK OF | TOPIC | TEXTBOOK |
|------|---------|-------------------------------------|----------|
| 11 | Nov 22 | Financial Innovation | 28 |
| 12 | Nov 29 | Mid-Term Details: TBA | |
| 13 | Dec 6 | Bank Analysis Report & Presentation | |