MFIN 710

Financial Theory

Winter 2023 Course Outline

Master of Finance

DeGroote School of Business

McMaster University

Course Objective

*This course explores the theoretical and conceptual foundations of standard methods applied in*

*modern-day finance. The methods involve various risk measures, valuation approaches, theories*

*of asset pricing, quantitative methods for applying asset pricing models, and approaches for*

*dealing with imperfect and asymmetric information.*

Instructor and Contact Information

**Section 1: Mondays 2:30pm – 5:20pm, BSB B155**

**Section 2: Tuesdays 11:30am – 2:20pm, ITB 139**

**Dr. Andrew Aziz**

[andyaziz@rogers.com](mailto:andyaziz@rogers.com)

For e-mail communications with the instructor, send from your McMaster e-mail account and always use the e-mail address above and “**MFIN 710**” for the subject heading.

**Office:** **GSB 105B**

**Office Hours:** **By appointment**

**Tel: 437 991 1876**

**Course website:**

<http://avenue.mcmaster.ca>

Course Elements

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

Course Description

This course explores the theoretical and conceptual foundations of finance as well as their use in practice and the associated implementation challenges. Among the theories, upon which modern finance is founded are (1) utility theory, (2) state-preference theory, (3) mean-variance portfolio theory, (4) the capital asset pricing model and the arbitrage pricing theory, (5) the Efficient Markets Hypothesis and (6) the Modigliani-Miller and information theories of capital structure.

A common theme is “How do individuals and society allocate scarce resources through a price system based on the valuation of risky assets?” Utility theory provides the foundations of rational decision making when deciding on risky alternatives. “How do people make choices?” State-preference theory, mean-variance portfolio theory, and arbitrage pricing provide descriptions of the objects of choice.

Combining these objects of choice with the theory of choice determines how risky alternatives are valued. Equilibrium models will be described in detail with an emphasis on the challenges of implementation in practice and pragmatic approaches. Recent advances in factor modeling will be explored in depth.

Finally, the Modigliani-Miller and information theories of capital structure asks the question “Does the method of financing have any effect on the value of assets, including the firm? Theories of agency cost and signalling contribute to answering this question.

Learning Outcomes

Upon completion of the course, students are expected to:

* Understand and apply the main theories of the pricing of financial assets.
* Use appropriate statistical methods to evaluate asset pricing models.
* Use software to manipulate financial data and present results of model application.
* Understand and apply main theories regarding valuation and corporate financial decisions in a risky environment.

Course Materials and Readings

|  |  |
| --- | --- |
| **Required**:   * **Financial Theory and Corporate Policy** *by T.E. Copeland, J.F. Weston, and K. Shastri*, 4th ed., 2005, Pearson Addison Wesley. [CWS]   <https://www.vitalsource.com/en-uk/publisher/products/financial-theory-and-corporate-policy-pearson-new-thomas-e-copeland-v9781292034812>   * Supplemental readings will be distributed via Avenue to Lean (A2L) |  |
|  |  |

Evaluation

Assessment will be based on a combination of lectures, discussion, independent research, and problem solving. Students are encouraged to think, analyze, evaluate, and problem-solve, not memorize. Students are expected to come to class on time and be prepared for the class, i.e., to have read the assigned readings and to have done the assigned problems. The final grade will be calculated as follows:

## Components and Weights

|  |  |  |
| --- | --- | --- |
| Final |  | **45%** |
| Mid Term |  | **25%** |
| Assignments (4) |  | **30%** |

**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](http://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

## Assignments

There will be **4** group assignments, each worth **7.5%** of your final grade totaling **30%** in aggregate. Groups will be self-formed and can be comprised of up to **4** members

## Midterm

There will be **one** ***in class*** midterm examination in this course that accounts for **25%** of your grade. Content will cover roughly the first **50%** of the course material

## Final Exam

There will be **one** ***in class*** final examination in this course that accounts for **45%** of your grade. It will be cumulative with content covering roughly **25%** of course material prior to the midterm and **75%** of course material after the midterm

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.

Requesting Relief for Missed Academic Work

In the event of an absence for medical or other reasons, students should review and follow the Missed Term Work regulations that our outlined on the Master of Finance website;

<https://mfin.degroote.mcmaster.ca/current-students/missed-term-work/>

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, located at:

[www.mcmaster.ca/academicintegrity](http://www.mcmaster.ca/academicintegrity)

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. 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.](http://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.

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*](https://secretariat.mcmaster.ca/app/uploads/Code-of-Student-Rights-and-Responsibilities.pdf) (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](https://sas.mcmaster.ca/) (SAS) at 905-525-9140 ext. 28652 or [sas@mcmaster.ca](mailto:sas@mcmaster.ca) to make arrangements with a Program Coordinator. For further information, consult McMaster University’s [*Academic Accommodation of Students with Disabilities*](https://secretariat.mcmaster.ca/app/uploads/Academic-Accommodations-Policy.pdf) 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](https://secretariat.mcmaster.ca/app/uploads/2019/02/Academic-Accommodation-for-Religious-Indigenous-and-Spiritual-Observances-Policy-on.pdf) 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, A2L and/or McMaster email.

Acknowledgement of Course Policies

Your enrolment in **MFIN 710** 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

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| --- | --- | --- |
| **Week** | **Date** | **Assignment** |
| 1 | Jan. 09  Jan. 10 | Consumption & Investment:  *Readings:*  *- CWS: Chapters 1, 2*. |
| 2 | Jan. 16  Jan. 17 | Theory of Choice & Utility Theory  *Readings:*  *- CWS: Chapters 3, 4.* |
| 3 | Jan. 23  Jan. 24 | Portfolio Choice & the Mean-Variance Approach  *Readings:*  *- CWS: Chapters 5* |
| 4 | Jan. 30  Jan. 31 | Market Equilibrium Models: CAPM  *Readings:*  *- CWS: Chapters 6* |
| 5 | Feb. 06  Feb. 07 | Market Equilibrium Models: APT  *Readings:*  *- CWS: Chapters 6* |
| 6 | Feb. 13  Feb. 14 | Factor Models  *Readings:*  *- Supplemental - to be posted* |
| 7 | Feb. 20  Feb. 21 | Reading Week |
| 8 | Feb. 27  Feb. 28 | Midterm |
| 9 | Mar. 06  Mar. 07 | Goal Based Portfolio Choice  *Readings:*  *- Supplemental - to be posted* |
| 10 | Mar. 13  Mar. 14 | Efficient Capital Markets Hypothesis  *Readings:*  *- CWS: Chapters 10, 11* |
| 11 | Mar. 20  Mar. 21 | Information Asymmetry & Agency Theory  *Readings:*  *- CWS: Chapter 12* |
| 12 | Mar. 27  Mar. 28 | Introduction to Behavioral Finance  *Readings:*  *- Supplemental - to be posted* |
| 13 | Apr. 03  Apr. 04 | Capital Structure & Cost of Capital  *Readings:*  *- CWS: Chapter 14* |
| 14 | Apr. 10  Apr. 11 | Catch-up & Review |