

**MFIN 705**  
**Financial Econometrics II**  
**Fall 2019 Course Outline [preliminary]**  
**DeGroote School of Business**  
**McMaster University**

---

***COURSE OBJECTIVE***

---

The course involves learning and applying econometric techniques that are important for empirical financial analysis. The main topics are econometric approaches involving return predictability, event study analysis, multi-factor model testing and analysis, and volatility and risk measurement. The approach will tie together several aspects covered earlier in the program, including application of financial theory, Matlab programming, and econometric analysis.

---

***INSTRUCTOR AND CONTACT INFORMATION***

---

**Dr. Ron Balvers**  
Title: Professor  
Email: balvers@mcmaster.ca  
Office: DSB A105  
Office Hours: Wed 2-4, Thu 2-4, or by appointment  
Tel: (905) 525-9140 x23969  
Class Time: Thu 7:00 pm – 10:00 pm, Fri 11:30am – 2:30pm  
TA: Ms. Parastoo Ostad  
Email: ostads@mcmaster.ca  
TA Office: TBD  
Office Hours: Tue 2-4, Thu 4-6

---

***COURSE ELEMENTS***

---

Credit Value:	3	Leadership:	No	IT skills:	Yes	Global view:	Yes
Ave. To Learn:	Yes	Ethics:	No	Numeracy:	Yes	Writing skills:	Yes
Participation:	Yes	Innovation:	Yes	Group Work:	Yes	Oral skills:	Yes
Evidence-based:	Yes	Experiential:	Yes	Final Exam:	Yes	Guest speaker:	No

---

## ***COURSE DESCRIPTION***

---

This course is taught primarily through lectures and assignments. Lectures may include additional material not covered in the textbooks for this course so that class notes are important. The course is essential for financial market analysis and research, and hence for planning and business decision making processes.

---

## ***LEARNING OUTCOMES***

---

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

- Perform the various approaches for predicting financial asset returns avoiding the pitfalls.
  - Statistically evaluate the predictability of asset returns.
  - Summarize the empirical regularities in the financial literature regarding return predictability.
  - Conduct from scratch any event-study analysis.
  - Apply the appropriate statistical tests to identify abnormal returns in event studies.
  - Determine the significant risk factors affecting returns.
  - Apply the correct statistical tools to evaluate asset pricing models.
  - Evaluate and identify risk based on different measures.
- 

## ***REQUIRED COURSE MATERIALS AND READINGS***

---

“Financial Econometrics”, by Oliver Linton, first edition (2019) published by Cambridge University Press.

Lecture notes also include some material from

“Econometric Analysis”, by William H. Greene, seventh edition, Prentice Hall (Pearson).

“Financial Econometrics, Problems, Models and Methods”, by C. Gouriéroux and J. Jasiak, first edition (2001), published by Princeton University Press.

“Introductory Econometrics for Finance”, by Chris Brooks, fourth edition (2019), published by Cambridge University Press.

The various primary source academic articles are available on-line.

---

## ***EVALUATION***

---

Assignment #1	10%
Assignment #2	10%
Assignment #3	10%
Midterm Exam	30%
Assignment #4	10%
Group Project	25%
Participation	5%
Total	100%

### ***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
A+	90 - 100
A	85 - 89
A-	80 - 84
B+	75 - 79
B	70 - 74
B-	60 - 69
F	00 - 59

### ***Assignments***

The assignments are marked individually. They each synthesize and apply the material of one of the four main topics covered and involve the use of Matlab programming. Each assignment counts for 10% of your total grade.

### ***Participation***

Participation in class is determined by a combination of class attendance, answering questions asked by the instructor, and participation in class discussions as they arise. Students are expected to display a name plate for identification purposes. Participation counts for 5% of your total grade.

### ***Midterm***

The midterm will involve a 3-hour written exam given Thursday November 7. The exam will cover the first three main topics covered in the course.

Please review the Graduate Examinations Policy:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/GradExamsPolicy.pdf>

### ***Group Project***

Students are assigned to a group of (typically) four. Each group is responsible for creating and presenting an applied research paper on one of three topics covered early in the course: return predictability, event studies, or factor model tests. Each group member will receive the same grade for the project (unless I find out from the majority of the group that a particular member did not pull their weight).

The paper will be judged on the following criteria:

1. Clarity. The paper should be self-contained and well-organized, with easily readable graphs and tables. The writing must be clear.
2. Appropriate Statistics. Techniques and methods learned in this course and throughout the program should be applied correctly and transparently in relevant situations.
3. Financial Analysis. The financial hypotheses and the results generated in the analysis must be presented and interpreted clearly and correctly, with a thorough discussion of the financial implications. Connections with existing literature on the topic should be discussed carefully.
4. Depth and sophistication. More credit will be given for more insightful, original, and interesting analysis and discussions.
5. Difficulty. More credit will be given for projects that require extensive data collection and application of more advanced methods (if these are relevant for the topic at hand!)

The paper should be at least 15 pages long but no more than 25 pages (including tables and graphs, but excluding programs and data). Separately Matlab programs should be submitted together with the data collected. The paper should carefully discuss null hypotheses and alternative hypotheses, and consider the size and power of appropriate tests, possibly via computer simulations. It should reference the exact methodology used and discuss (dis)advantages relative to other methodologies. Key results should be presented graphically (e.g., show cumulative abnormal returns for event studies). Relate the results explicitly to other literature on the topic, with proper referencing. The data sources should be clear and numerical results must be interpreted carefully.

Each group will present their paper in class during one of the two last weeks of the term.

### **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.

---

## ***ACADEMIC DISHONESTY***

---

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](http://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

### **Use of Turnitin**

In this course we will be using a web-based service (Turnitin.com) to reveal plagiarism. Students will be expected to submit their work electronically to Turnitin.com and in hard copy so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to; <http://www.mcmaster.ca/academicintegrity/turnitin/students/>

Note that all group members are responsible for the whole research paper submitted. This means that all group members will be held responsible for plagiarism committed in any part of the paper submitted.

---

## ***MISSED EXAMINATIONS/TESTS/CLASS PARTICIPATION***

---

Where students miss a regularly scheduled mid-term or class participation for legitimate reasons as determined by the MFIN Program 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 MFIN Program Office within five (5) working days upon returning to school.

To document absences for health related reasons, please provide the Petition for Relief for MFIN Missed Term Work and the McMaster University Student Health Certificate which can be found on the DeGroote website at <https://mfin.degroote.mcmaster.ca/current-students/forms/>.

**Please do not use the online McMaster Student Absence Form as this is for Undergraduate students only.**

University policy states that a student may submit a maximum of three (3) Medical certificates per year after which the student must meet with the Program Director.

To document absences for reasons other than health related, please provide the Petition for Relief for MFIN Missed Term Work which can be found on the DeGroote website at <https://mfin.degroote.mcmaster.ca/current-students/forms/> and documentation supporting the reason for the absence.

Students unable to write a mid-term at the posted exam time due to the following reasons: religious; representing university at an academic event; conflicts between two overlapping scheduled mid-term exams; or other extenuating circumstances have the option of applying for special exam arrangements. Such requests must be made to the MFIN Program Office at least ten (10) working days before the scheduled exam along with acceptable documentation. Instructors cannot themselves allow students to unofficially write make-up exams/tests.

Adjudication of the request must be handled by the MFIN Program Office.

If a mid-term exam is missed without a valid reason, students will receive a grade of zero (0) for that component.

---

## **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](mailto: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>

---

## **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.

---

## **ACKNOWLEDGEMENT OF COURSE POLICIES**

---

Your enrolment in MFin 705 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 Avenue To Learn. **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**

---

<b>READING LIST</b>		
<b>WEEK</b>	<b>DATE</b>	<b>ARTICLES</b>
<b>1</b>	<b>Sept. 12, Sept. 13</b>	<b>Return Predictability and Market Efficiency Chapter 3 (Linton)</b>
<b>2</b>	<b>Sept. 19, Sept. 20</b>	<b>Return Predictability and Market Efficiency</b> Diebold, F. X. (2015). Comparing Predictive Accuracy, Twenty Years Later: A Personal Perspective on the Use and Abuse of Diebold–Mariano Tests. <i>Journal of Business and Economic Statistics</i> 33, 1-9. Welch, I., and A., Goyal, (2008) “A Comprehensive Look at the Empirical Performance of Equity Premium Prediction”, <i>Review of Financial Studies</i> , 21, 1455-1508.

3	Sept. 26, Sept. 27	<b>Return Predictability and Market Efficiency</b> <b>Chapter 4 (Linton)</b> <b>Chapter 9.6-9.7 (Linton)</b> White, H., 2000. A Reality Check for Data Snooping. <i>Econometrica</i> 68, 1097–1126. McLean, R.D. and J. Pontiff, 2016. Does Academic Research Destroy Stock Return Predictability? <i>Journal of Finance</i> 71, 5-31.
4	Oct. 3, Oct. 4	<b>Assignment 1 due</b> <b>Event Study Analysis</b> <b>Chapter 6 (Linton)</b>
5	Oct. 10, Oct. 11	<b>Factor Model Tests</b> <b>Chapter 7 (Linton)</b> J. Lewellen, 2015. The Cross-section of Expected Stock Returns. <i>Critical Finance Review</i> 4, 1-44.
6	Oct. 17, Oct. 18	<b>Assignment 2 due</b> <b>Factor Model Tests</b> <b>Chapter 8 (Linton)</b>
7	Oct. 24, Oct. 25	<b>Factor Model Tests</b> <b>Chapter 8 (Linton)</b> Jegadeesh, N., J. Noh, K. Pukthuanthong, R. Roll, J. Wang, 2019. Empirical Tests of Asset Pricing Models with Individual Assets: Resolving the Errors-in-Variables Bias in Risk Premium Estimation. <i>Journal of Financial Economics</i> 133, 273-298.
8	Oct. 31, Nov. 1	<b>Assignment 3 due</b> <b>Factor Model Tests</b> <b>Panel Data: Chapter 11 (Greene)</b>
9	Nov. 7	<b>Midterm</b>
10	Nov. 14, Nov. 15	<b>Volatility and Risk Measurement</b> <b>Chapter 11 (Linton)</b>
11	Nov. 21, Nov. 22	<b>Volatility and Risk Measurement</b> <b>Chapter 11 (Linton)</b>
12	Nov. 28, Nov. 29	<b>Assignment 4 due</b> <b>Team Presentations</b>
13	Dec. 5, Dec. 6	<b>Team Presentations</b> <b>Group Project due</b>