F771
Financial Economics I
Winter 2020 Course Outline

Finance and Business Economics
DeGroote School of Business
McMaster University

COURSE OBJECTIVE

This course is a first Ph.D.-level course in asset pricing and modern portfolio theory. The goal of this course is to provide you with an overview of major theories, empirical approaches and results in these areas in a discrete time setting.

INSTRUCTOR AND CONTACT INFORMATION

Dr. Ron Balvers
Title: Professor
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Office: DSB A105
Office Hours: Tue 2-4, Thu 2-4, or by appointment
Tel: (905) 525-9140 x23969

Class Time: Tuesday 10:00 am – 1:00 pm, DSB/421

COURSE DESCRIPTION

This course deals with the issues of Asset Pricing and Portfolio Theory. It focuses on the factors determining the risk of individual financial and non-financial assets, the measurement of these risk factors, and the related portfolio choices. The risk factors are of course central arguments in the determination of the prices of the financial assets. Emphasis is on a solid theoretical foundation in deriving the risk determinants, which is based on general economic principles and specific general equilibrium models as used in the economics literature. The method is one of discrete-time dynamics which allows presentation of standard finance results, typically derived in continuous time, but with a minimum of mathematical ballast.

AUDIENCE AND PREREQUISITES

This course is intended mainly for first-year finance Ph.D. students. However, doctoral students and advanced master's students from other areas are also welcome to take the course.

The course assumes background knowledge in microeconomics and finance theory (at least at the master's level). It also requires a mathematical background that includes upper-level undergraduate calculus, matrix algebra and statistics.

LEARNING OUTCOMES

At the end of the course, students are expected to: (1) be familiar with the asset pricing and portfolio choice literature in general; (2) have an in-depth understanding of modern theories of asset pricing and portfolio choice; (3) have the skills and understanding to apply and adapt standard asset pricing models to conduct independent research.

REQUIRED COURSE MATERIALS AND READINGS

[Required] Class Notes. These are available electronically. An older version is on my home page at http://profs.degroote.mcmaster.ca/business/balvers, but please remind me to send you the updated version.

[Recommended] Bali, Turan G., Robert F. Engle, and Scott Murray. *Empirical Asset Pricing: The Cross Section of Stock Returns*, Hoboken, NJ: John Wiley & Sons, 2016

[Recommended] John H. Cochrane. *Asset Pricing*, Princeton, NJ: Princeton University Press, first edition, 2001 or updated edition, 2004.

[Recommended] Campbell, John Y., Andrew W. Lo, and A. Craig MacKinlay. *The Econometrics of Financial Markets,* Princeton, NJ: Princeton University Press, 1997.

[Recommended] Back, Kerry E. *Asset Pricing and Portfolio Choice Theory*, Toronto, ON: Oxford University Press, 2010.

EVALUATION

Learning in this course results primarily from in-class discussion and out-of-class analysis and study. Your learning will be tested by means of two exams, a term paper, and homework assignments. The assignments involve use of Matlab and apply asset pricing models to actual data.

Your final grade will be calculated as follows: A midterm and a final exam, each counting for 30% of the grade; a term paper counting for 30% of the grade; and four to seven homework assignments, together counting for 10% of the grade.

There will be a straight grading scale based on the percentage earned (with the aforementioned weights) of the maximum score: A+ ↔ 90% - 100%; A ↔ 85% - 89%; A- ↔ 80% - 84%; B+ ↔ 75% - 79%; B ↔ 70% - 74%; B- ↔ 60% - 69%; F ↔ below 60%. Attendance is expected but will not be factored into the grades. Make-ups or a grade of Incomplete will not be given unless a satisfactory excuse is provided.

THE TERM PAPER

Students are required to turn in one term paper of around fifteen typed, double-spaced pages. In the paper you may present and process an original idea. Alternatively, you may try to reproduce the empirical results of a previously published paper in the area of financial economics; this is a minimum requirement: a good term paper might also try ways to improve on the existing work by extending the sample period, including different variables, using different econometric methods, or, generally, checking the robustness of the results.

The time table for the paper is as follows. First, on *Tuesday January 21* you must get approval from me for the paper you choose to reproduce and you must explain to me how you will get the relevant data. Second, on *Tuesday March 10* you are required to submit and discuss in class your initial regression results (or theoretical results as the case may be). Third, the complete paper is due in our class of *Tuesday March 31*. Note that submission of your paper to me later than March 31 will result in a grade of 0 on the paper, unless a university-approved excuse can be provided for the delay. It is therefore very important that you start work on your paper early and that you have your data in hand well before the midterm.

While I will be happy to provide you with suggestions on how to proceed on your paper during the semester, the version of the paper you hand in to me on March 31 will be final and your term paper grade will be based on this version. My criteria for judging your paper are the following: (1) accuracy: correctness of your interpretation of the paper to be replicated and thoroughness in conducting the replication (or correct derivation of your theoretical results as the case may be); (2) writing: organization and clarity, especially as related to exposition and comparison of your results to the original study (or other work as the case may be); (3) degree of difficulty of the project; (4) originality: the extent to which you contribute or suggest additions to the original study (or other work as the case may be).

ACADEMIC DISHONESTY

It is the student's responsibility to understand what constitutes academic dishonesty. Please refer to the University Senate Academic Integrity Policy at the following URL:

http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf

This policy describes the responsibilities, procedures, and guidelines for students and faculty should a case of academic dishonesty arise. Academic dishonesty is defined as to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. Please refer to the policy for a list of examples. The policy also provides faculty with procedures to follow in cases of academic dishonesty as well as general guidelines for penalties. For further information related to the policy, please refer to the Office of Academic Integrity at:

http://www.mcmaster.ca/academicintegrity

MISSED ACADEMIC WORK

Late assignments will not be accepted. No extensions are available except under extraordinary circumstances. Please discuss any extenuating situation with your instructor at the earliest possible opportunity. Students unable to write the mid-term or final exam at the posted exam time, or to complete an assignment or the term paper at the posted time due to the following reasons: religious; work- related (for part-time students only); representing university at an academic or varsity athletic event; conflicts between two overlapping scheduled exams; or other extenuating circumstances, have the option of applying for special arrangements. If an exam or assignment is missed without a valid reason, students will receive a grade of zero (0) for that component.

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 weekly during the term and to note any changes.

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http://www.copyright.mcmaster.ca/Access_Copyright_Agreement

STUDENT ACCESSIBILITY SERVICES

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

www.degroote.mcmaster.ca

COURSE SCHEDULE

WEEK	DATE	TOPICS AND ASSIGNMENTS
1	Tue. Jan 7	Preliminaries on Risk and Time Preference. Valuation Approaches and Asset Pricing.
2	Tue. Jan 14	Continuation of Preliminaries Discussion Review of Mean-Variance Analysis and Portfolio Choice.
3	Tue. Jan 21	Choose and get approval for your term paper topic. The CAPM: Sharpe-Lintner Model, Zero-Beta CAPM. Homework set #1 due.
4	Tue. Jan 28	The CAPM: Empirical Specification, Roll Critique. Homework set #2 due.
5	Tue. Feb 4	Other static asset pricing models: Non-Tradable Assets and Human Capital, Durable Consumption Goods, The International CAPM.
6	Tue. Feb 11	Other static asset pricing models: Arbitrage Pricing. Homework set #3 due.
7	Tue. Feb 25	Empirical approaches to Arbitrage Pricing. The Fama-French three-factor and five-factor Models.
8	Tue. Mar 3	Midterm. All material covered to date.

9	Tue. Mar 10	Asymmetric Information: Market Efficiency, Grossman-Stiglitz Model, Adverse Selection, Insider Trading. Discuss initial regression results for your term paper.
10	Tue. Mar 17	Liquidity and Asset Pricing: Amihud and Mendelson model, Acharya and Pedersen model. Homework set #4 due.
11	Tue. Mar 24	General issues in Asset Pricing: Complete Markets, Pricing Kernels, Conditional Asset Pricing and Predictability, Derivatives Pricing.
12	Tue. Mar 31	Dynamic Asset Pricing: Dynamics and the CAPM, the Merton Model, the Consumption CAPM. Term paper due.
13	Tue. Apr 7	Dynamic Asset Pricing: Production-Based Asset Pricing. Homework set #5 due.

Note: The above schedule is subject to change.