Overview

Asset Pricing is, probably, the most important area of financial economics. It tries to develop an understanding of the prices of claims to uncertain payments. But as prices are directly related to returns it can also be thought of as a theory related to the returns of assets.

Hence, Financial Markets and Instruments is an introduction to the quantitative analysis of the risk and return of risky assets. This analysis of asset pricing lies at the heart of virtually all of financial economics. There are currently two approaches towards pricing: absolute (like CAPM and APT) and relative (like Black-Scholes). The first approach is more ambitious since it tries to relate prices to fundamentals. This course will seek to provide a thorough overview of the current state of the art approaches towards asset pricing and will cover theoretical and some empirical work by leading experts in the field.

But the course intends also to provide PhD students with a modest overview of Finance as an academic discipline, so it might include some topics in corporate finance and possibly market microstructure.

The development of the material is mathematical, but the main objective is to develop intuition, discover empirical predictions and ultimately develop some original research ideas that can, eventually, lead to writing a thesis and publish papers.

Learning Goals and Outcomes

- Students will learn basic issues, results and methodologies in financial economics.
- Students will be familiarized with use of mathematics to prove basic propositions in financial economics.
- Students will become familiar with the underlying assumptions related to results and propositions. They will also understand the extend of the support that these assumptions enjoy as well as their problems and issues so that they can be helped to ultimately develop their own ideas by possibly relaxing or reformulating those assumptions.
References

Textbooks:

Required:
• Theory of Asset Pricing by George Pennacchi, Pearson / Addison Wesley, 2008
• Asset Pricing and Portfolio Choice Theory by Kerry E. Back, Oxford University Press, 2017

Other related books:
• Economic and Financial Decisions under Risk by Louis Eeckhoudt, Christian Gollier and Harris Schlesinger, Princeton University Press, 2005
• Foundations for Financial Economics by Huang and Litzenberger, Prentice-Hall, 1988
• Introduction to Mathematical Finance by Stanley Pliska, Blackwell, 1997

Papers:

Prerequisites

This is an elective course and as such assumes that students have taken the basic microeconomics and econometrics course offered by the program. Students are also expected to have a good training in basic math topics: elementary set theory and real analysis, multivariate calculus, optimization and linear algebra.
Grading Policy

The course grade will be based on a final (50%) and an in-class midterm (40%), and my evaluation (10%) of their class participation in class discussions and possibly presentations. Students are expected to come to all classes and actively participate in class discussion.

Approximate Time Schedule and Topics Covered

Week1  Introduction to securities markets and investors
Week2  Expected Utility and Risk Aversion
Week3  Stochastic Dominance
Week4  Mean-Variance Analysis, Portfolio Frontier & Two-Fund separation
Week5  CAPM, Arbitrage, and Linear Factor Models
Week6  Consumption-Savings Decisions and State Pricing
Week7  Multiperiod Discrete-Time Model of Consumption and Portfolio Choice
Week8  Midterm Exam
Week9  Multiperiod Market Equilibrium
Week10 Basics of Derivative Pricing
Week11  Asset Pricing with Differential Information
Week12 Other Topics
Week13 Other Topics
Week 14 Final Exam

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• 'Copying another person’s actual words without the use of quotation marks and foot- notes attributing the words to their source;
• 'Presenting another person’s ideas or theories in your own words without acknowledging the source;
• 'Using information that is not common knowledge without acknowledging the source;
• 'Failing to acknowledge collaborators on homework and laboratory assignments.
• 'Internet plagiarism includes submitting downloaded term papers or parts of term papers, paraphrasing or copying information from the internet without citing the source, and “cutting & pasting” from various sources without proper attribution.’
• A student who plagiarizes may incur academic and disciplinary penalties, including failing grades, suspensions, and expulsion.
• A complete copy of the CUNY Policy on Academic Integrity may be downloaded from the Graduate Center’s home page.