

Yosef Bonaparte Finance Courses

1. Investment Management

Course Description:

To provide training that is important in understanding the investment process—the “buy side” of the financial world. In particular, to provide instruction in the following topics, both in theory and in using financial markets data to test some of these theories:

1. The Basic Theory and Practice of Portfolio Choice- how investors view risk and return of securities and portfolios (theory and in practice)
2. Empirical evidence on the efficiency of stock markets
3. discussion of the new field of behavioral finance
4. Equilibrium Pricing Models and their Implications for Efficient Portfolios (such as CAPM)
5. Derivative Pricing Models: The Black-Scholes model, binomial pricing models, swaps, etc.
6. Fixed-Income Pricing Models: Bootstrapping the term structure, pricing using the term structure, portfolio choice in fixed-income markets, etc.

Required Texts: The primary text is *Investments, 6th Edition*, by Bodie, Kane and Marcus, Irwin.

Prerequisite course: Econometrics -

Familiarity with statistics should extend through regression, covariance, and correlation. In addition, students should have a good working knowledge of common software useful for financial and statistical analysis.

2. Corporate Finance

Course Description: This course is an introduction to the principles of finance and financial analysis. Major topics include: the time value of money, risk and return, financial management, and the financial system.

Required Texts: *Fundamentals of Corporate Finance* Standard Edition by Stephen Ross, Randolph Westerfield and Bradford Jordan

Prerequisite course: Calculus and Prob & Stats

3. Financial Economics

Course Description

This course is an introduction to financial economics. We will cover the analytical tools and finance theory necessary to make good investment decisions and to understand the paradigm of security valuation. Important themes in the course include individual decision making, risk and return, arbitrage, and market equilibrium.

Outline (tentative)

1. Introduction - Chapters 1-3 and 5, including appendix to chapter 5. Appendix A
2. Prices, portfolios and arbitrage - Chapter 20.1, 20.2, 20.4
3. Introduction to fixed income securities- Chapter 14.1-14.4, 15.1, 16.1
4. Introduction to stock valuation- Chapter 18.1-18.4, 18.7
5. Market efficiency- Chapters 4 and 12
6. Risk aversion. Introduction to asset allocation- Chapters 6-8
7. Market equilibrium. The Capital Asset Pricing Model- Chapters 9.1-10.2
8. Multifactor Models, Arbitrage Pricing Theory- Chapters 11.1-11.5
9. Forwards, futures and options- Chapters 22.1-22.4 and 21.1-21.3

Required Texts: *Investments, 7th Edition*, by Bodie, Kane and Marcus, Irwin.

Prerequisite course: Calculus and Prob & Stats

4. Behavioral Finance

Course Description:

Behavioral finance argues that many facts about asset prices, investor behavior, and managerial behavior are best understood in models where at least some agents are not fully rational. This course will start by working through several survey articles that will give students a feel for the different strands of behavioral finance research. In particular:

1. Cover limits to arbitrage (smart investors)
2. Persistent decision-making biases that have been documented by psychologists.
3. Covers investor behavior
4. Behavioral corporate (Miscellaneous topics such as IPOs, agency problems in investment management)

Required Text:

Inefficient Markets: An Introduction to Behavioral Finance. Andrei Shleifer

Prerequisite course: Corporate Finance

Course Description:

Behavioral finance argues that many facts about asset prices, investor behavior, and managerial behavior are best understood in models where at least some agents are not fully rational. This course will start by working through several survey articles that will give students a feel for the different strands of behavioral finance research.

The first section of the course will cover limits to arbitrage. Efficient markets theory argues that smart investors will quickly reverse any dislocations caused by irrational investors. The theory of limits to arbitrage suggests a number of reasons why this might not be the case. We will spend a total of five classes going over the theory and evidence related to limits to arbitrage, and then we will spend a sixth class discussing the Dotcom bubble, since that time period provides great examples of limits to arbitrage at work.

The second section of the course looks at persistent decision-making biases that have been documented by psychologists. Much of behavioral finance consists of theorists making predictions about asset pricing given that at least some investors have one or more of these decision-making biases.

The third section covers investor behavior, and the fourth section covers behavioral corporate finance. Miscellaneous topics such as IPOs, agency problems in investment management, and the performance of investment managers, will be interspersed throughout the semester.

The course will feature extensive discussion of recent events such as LTCM, the dotcom bubble, and Enron. The last five years have provided ample demonstration of the concepts of behavioral finance, and have led in no small part to behavioral finance becoming the mainstream within the profession.

5. Asset Pricing Theory

Course Outline:

I. Single-Period Portfolio Choice and Asset Pricing

1. Expected Utility and Risk Aversion
2. Mean-Variance Analysis
3. The CAPM, Arbitrage, and Linear Factor Models
4. Consumption-Savings Decisions and State Pricing

II. Multiperiod Consumption, Portfolio Choice, and Asset Pricing

5. A Multiperiod Discrete Time Model of Consumption and Portfolio Choice
6. Multiperiod Market Equilibrium

III. Contingent Claims Pricing

7. Basics of Derivative Pricing
8. Essentials of Diffusion Processes and Itô's Lemma
9. Dynamic Hedging and PDE Valuation
10. Arbitrage, Martingales, and Pricing Kernels
11. Mixing Diffusion and Jump Processes

IV. Asset Pricing in Continuous Time

12. Continuous-Time Consumption and Portfolio Choice
13. Equilibrium Asset Returns
14. Time-Inseparable Utility

V. Additional Topics in Asset Pricing

15. Behavioral Finance and Asset Pricing
16. Asset Pricing with Differential Information

Required Text: Pennacchi, G., 2008, *Theory of Asset Pricing*, Pearson Education, Boston, MA.

URL: <http://www.pearsonhighered.com/educator/academic/product/0,1144,032112720X,00.html>

Useful References:

Ingersoll, J., 1987, *Theory of Financial Decision Making*, Rowman & Littlefield, Totowa, NJ. (copy on reserve at Business and Economics Library)

Cochrane, J., 2005, *Asset Pricing*, Princeton University Press, Princeton, NJ. (copy of 2001 edition on reserve at Business and Economics Library)

Duffie, D., 2001, *Dynamic Asset Pricing Theory*, Princeton University Press.

Huang, C. and R. Litzenberger, 1988, *Foundations for Financial Economics*, Elsevier Science Publishers (North-Holland), New York.

LeRoy, Stephen F. and Jan Werner, 2001, *Principles of Financial Economics*, Cambridge University Press, Cambridge, UK

Merton, R.C., 1993, *Continuous-Time Finance*, Blackwell Publishers, Cambridge, MA

Gollier, Christian, 2001, *The Economics of Risk and Time*, MIT Press, Cambridge, MA

Hull, J.C., 2000, *Options, Futures, and Other Derivatives*, Prentice Hall, Upper Saddle River, NJ.

Campbell, J., A. Lo, and C. MacKinlay, 1997, *The Econometrics of Financial Markets*, Princeton University Press, Princeton, NJ.

Prerequisite course: Econometrics and Advanced Macroeconomics