Finance 400
Asset Pricing Theory

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Office Hours: Mondays 12:00 – 1:00 and Wednesdays 1:00 – 2:00 or by appointment.

Course Syllabus

Required:

Course packet of articles sold at Notes and Quotes, 502 E. John St. (Johnstowne Centre).

Class note chapters in pdf file format can be downloaded at www.business.uiuc.edu/gpennacc.
Chapters will be posted during the weekend (or earlier) prior to class.

Recommended Texts:

(copy on reserve at Business Library)


Other Useful References:


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

Review Articles:


I. Single Period Portfolio Choice and Asset Pricing

1. Expected Utility and Risk Aversion
   “Preferences When Returns are Uncertain”
   “Risk Aversion and Risk Premia”
   Ingersoll, Chapter 1
   “Risk Aversion and Portfolio Choice”
   Ingersoll, Chapter 3

2. Mean-Variance Analysis
   “Assumptions on Preferences and Asset Returns”
   “The Efficient Frontier without and with a Riskless Asset”
   Ingersoll, Chapter 4
   Cochrane, Chapter 5
   “An Application of Mean Variance Analysis: Cross-Hedging”

3. The Capital Asset Pricing Model, Arbitrage, and Linear Factor Models
   “The Capital Asset Pricing Model”
   Cochrane, Chapter 9.1
   “Arbitrage and Linear Factor Models”
   Ingersoll, Chapter 7
   Cochrane, Chapter 9.4

4. Consumption-Savings Decisions and Asset Pricing
   Ingersoll, Chapters 2 and 8
   Cochrane, Chapters 1.1-1.4, 2, 3, and 4.1-4.2

II. Multi-Period Consumption, Portfolio Choice, and Asset Pricing

5. The Multi-Period Discrete Time Models
   “Intertemporal Consumption and Portfolio Choice: The Dynamic Programming Approach”
   Ingersoll Chapter 11
   Cochrane, Chapter 9.1

6. Multi-Period Market Equilibrium
“Asset Pricing in the Multi-Period Model and the Lucas Model”
“Rational Speculative Asset Price Bubbles”
Cochrane, Chapters 20.1 and 21.1

III. Contingent Claims Pricing

7. Basics of Derivative Pricing
   “Forward and Option Contracts”
   Ingersoll Chapter 14
   Cochrane, Chapter 17.1
   “Binominal Option Pricing”

8. Diffusion Processes and Itô’s Lemma
   Ingersoll Chapters 12 and 16
   Cochrane, Appendix

   “Black-Scholes Option Pricing”
   Cochrane, Chapter 17.2
   “An Equilibrium Term Structure Model”
   Ingersoll, Chapter 18
   Cochrane, Chapter 19
   “Option Pricing with Random Interest Rates”

10. Arbitrage, Martingales, and Pricing Kernels
    Cochrane, Chapter 1.5 and 4.3

11. Mixing Diffusion and Jump Processes
    “Valuing Contingent Claims When Asset Prices Can Jump”

IV. Asset Pricing in Continuous Time

12. Continuous Time Consumption and Portfolio Choice
    “The Dynamic Programming Approach”
    Ingersoll Chapter 13
    “An Intertemporal Capital Asset Pricing Model”
    Cochrane, Chapter 9.2-9.3, 9.5
    “The Martingale Approach”

13. Equilibrium Pricing in Continuous Time
   Ingersoll Chapter 15

14. Time-Inseparable Utility
   Cochrane, Chapter 21.2
   “Recursive Utility”

15. Psychological Biases and Asset Pricing

V. Additional Topics in Bond Pricing

16. Models of the Term Structure of Interest Rates
   “Equilibrium models”
   “Arbitrage-Free Models of the Term Structure”
   “Fixed-Income Derivatives”

17. Models of Credit Risk:
   “Modeling Credit Risk”
   Ingersoll Chapter 19

VI. Valuation Under Asymmetric Information

18. Equilibrium with Private Information
   “The Grossman Model”
“A Noisy Rational Expectations Equilibrium”

19. Asymmetric Information

“Market Micro-Structure: The Kyle Model”

“Notes on The Allocation of Credit and Financial Collapse”

Articles marked CP are included in the course packet. Articles marked JSTOR can be downloaded from http://www.jstor.org/browse.

There will be an in-class mid-term examination on Monday, October 20. The final examination will be as scheduled during the final examination week. Homework problems will be assigned weekly and students will be randomly selected to present their answers during class. Plus and minus grades will be used.