Course Syllabus

Required:

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Course website for problem and exam solutions: www.business.illinois.edu/gpennacc/fin591.html.

Useful References:

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Publishers (North-Holland), New York.

University Press, Cambridge, UK.


University Press, Princeton, NJ.

Review Articles:


Sundaresan, S., 2000, “Continuous-Time Methods in Finance: A Review and an Assessment,”
*Journal of Finance* 55, 1569-1622.
I. Single-Period Portfolio Choice and Asset Pricing

1. Expected Utility and Risk Aversion
   “Preferences When Returns are Uncertain”
   *Journal of Economic Perspectives* 1, 121-154.
   “Risk Aversion and Risk Premia”
   219-232.
   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”
   89, 1182-1196.

3. The CAPM, 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 State Pricing
   Ingersoll, Chapters 2 and 8
   Cochrane, Chapters 1.1-1.4, 2, 3, and 4.1-4.2

II. Multiperiod Consumption, Portfolio Choice, and Asset Pricing

5. A Multiperiod Discrete Time Model of Consumption and Portfolio Choice
   “Intertemporal Consumption and Portfolio Choice: The Dynamic Programming
   Approach”
   Ingersoll Chapter 11
   Cochrane, Chapter 9.1

6. Multiperiod Market Equilibrium
   “Asset Pricing in the Multi-Period Model and the Lucas Model”
   MIT Press, p.506-12. R
   “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. Essentials of Diffusion Processes and Itô’s Lemma
   Ingersoll Chapters 12 and 16
   Cochrane, Appendix

9. Dynamic Hedging and PDE Valuation
   “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
    “The Martingale Approach”

13. Equilibrium Asset Returns
    “An Intertemporal Capital Asset Pricing Model”
    Cochrane, Chapter 9.2-9.3, 9.5
    Ingersoll Chapter 15
    “Breeden’s Consumption CAPM”
    “A Cox-Intersoll, and Ross Production Economy”

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

V. Additional Topics in Asset Pricing

15. Behavioral Finance and Asset Pricing

16. Asset Pricing with Differential Information
“Equilibrium with Private Information”
“A Noisy Rational Expectations Equilibrium”
“Asymmetric Information”

Articles marked R are on reserve at the Business and Economics Library. All other articles may be downloaded from the University of Illinois Library Online Research Resources.

There will be an in-class mid-term examination on **Monday, March 15**. 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. The course grade will be computed as follows: final exam 50%, mid-term exam 40%, homework problems 10%. Plus and minus grades will be used.