NEW YORK UNIVERSITY STERN SCHOOL OF BUSINESS

Financial Theory IV

B40.2337.20, Spring 2009

Professor Jennifer N. Carpenter carpenter@stern.nyu.edu
office: KMC 9-99 (212) 998-0352

This is a doctoral level course on continuous-time asset pricing and portfolio choice.

Course Outline

1. Mathematics and statistics background
2. Arbitrage and martingales
3. The continuous-time financial market
4. Contingent claims pricing
5. American options
6. Optimal consumption and portfolio choice
7. Contingent claims pricing with portfolio constraints
8. Optimal consumption and investment with portfolio constraints
9. Equilibrium

Recommended books

Karatzas, I. and S. E. Shreve, *Methods of Mathematical Finance*, Springer, 1998.

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

Merton, R., *Continuous-Time Finance*, Blackwell, 1990.

Ingersoll, J., *Theory of Financial Decision Making*, 1987.

Karatzas, I. and S. E. Shreve, *Brownian Motion and Stochastic Calculus*, Springer, 1991.

Chung, K., *A Course in Probability Theory*, Academic Press, 1974.

Royden, H. L., *Real Analysis*, Macmillan, 1988.