

NEW YORK UNIVERSITY STERN SCHOOL OF BUSINESS

Financial Theory IV

B40.2337.20, Spring 2014

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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. Optimal consumption and portfolio choice
6. Equilibrium
7. American options

Recommended books

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

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

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

Shreve, S. E., *Stochastic Calculus for Finance II: Continuous-Time Models*, Springer, 2004.

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

Assignments

1. Exam on March 25 (67% of grade)
2. Referee report on a paper in an area of your interest that uses continuous-time modeling, due May 30 (33%)