ECO-914 Advanced Financial Economics

Course Description

Covers advanced topics in the theory of financial markets with a focus on continuous time models. Topics include multi period securities markets and martingales; pricing of contingent securities such as options; optimal consumption and portfolio problems of an individual; dynamic equilibrium theory and the intertemporal capital asset pricing model; term structure of interest rates; and equilibrium with asymmetric information, transaction costs, and borrowing constraints. Recent empirical methods in finance, including the estimation and testing of market efficiency, the random walk hypothesis, the CAPM/APT, various term structure models, option pricing theories, and market microstructures; performance evaluation; bond rating and default analysis; event study methodology; continuous-time econometrics; and general time series methods. An empirical term project is required.

Learning Outcomes

After completing the course, students should be able to understand

- Theoretical and empirical analyses of corporate financing and investment decisions.
- equilibrium with asymmetric information, transaction costs, and borrowing constraints
- theory of financial markets with a focus on continuous time models
- recent empirical methods in finance, including the estimation and testing of market efficiency

Recommended Books

C. Walsh, *Monetary Theory and Policy* (2nd Edition), MIT Press, 2003.

T. Cooley (Editor), *Frontiers of Business Cycle Research*, Princeton University Press, 1995.

Focardi, F. and F. Fabozzi (2004). "The Mathematics of Financial Modeling and Investment

Management." Wiley E-Series.

Elliott, R. and P. Kopp (2005). Mathematics of Financial Markets. Springer, NY, USA.