ECON 821: Time Series Econometrics

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Fall, 2012

1. COURSE OUTLINE

This is a course on time series econometrics offered for graduate students. Theory, and empirical applications will be covered, and both stationary and non-stationary time series will be considered. An outline of topics is provided below. Students are expected to have some background in statistics and linear regression theory. A relatively long reading list is provided for your reference.

- **Time:** Monday and Wednesday 9:00 - 10:15AM
- **Location:** Carney 305

2. Requirements and Grading

- There will be a term paper and a presentation.

3. Text Books and Reference Books

- Structural Macroeconometrics, DeJong and Dave, Princeton University Press.
- Nonlinear Time Series, Fan and Yao, Springer.

• Options, Futures, and Other Derivatives (4th Edition), by John C. Hull

4. Additional General Reference


15. Nonparametric Statistics for Stochastic Processes


Outline of Topics

**Part I: Introduction**: Empirical Feature; Time Series Modelling

**Part II: Stationary Parametric Models**: Stationary time series; Multivariate Time Series and VAR

**Part III**: An introduction to DSGE models

**Part IV**: An introduction of Inferential Theory in Econometrics

**Part V**: Distributions of Conventional Estimators and Testing Statistics

**Part VI: Unit Root/Nonstationary Models**: Nonstationary Time Series Models: Unit Root; Cointegration

**Part VII**: A General Discussion on Popular Dynamic Models in Econometrics: GMM, MLE, MD/VAR, TSLS

**Part VIII**: Selected topics: volatility models, bootstrapping, nonparametrics.