SPRING 1999       COURSE OUTLINE       STATISTICS 617

Textbook: Univariate and Multivariate Time Series Methods
         by William Wei
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Office Hrs: M 4:00pm-5:15pm and by appt

1. Preliminaries
   (a) Autocorrelation properties of stationary models
   (b) Spectral properties of stationary models
   (c) Sample ACF and PACF

2. Estimation of Stationary and Nonstationary Models (Box-Jenkins Methodology)
   Identification, Estimation and Diagnostic Checking

3. Forecasting

4. Seasonal Models

5. Transfer Function Models

6. Spectral Analysis of Time Series Models

7. Asymptotic properties of Maximum Likelihood and Least Squares Estimates


10. Bayesian Estimation of Time Series Models

Grade will be based on a Midterm(30%), Final(30%) and Homework(40%).
Students will be required to make presentations as a part of homeworks and exams.
Selected References:

Fuller, Wayne  An Introduction to Statistical Time Series
Shumway, Robert  Applied Statistical Time Series Analysis
Brockwell-Davis  Time Series Analysis, Theory and Methods
Chatfield, Chris  The Analysis of Time Series
Brillinger, David  Time Series: Data Analysis and Theory
Pankratz, Alan  Forecasting with Univariate B-J Models
Abraham-Ledolter  Statistical Methods for forecasting