

ADC6525 Time Series Analysis I

2014 Spring Term

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Objective: This is a basic course in time series analysis. The objective of the course is to give students a better understanding of the concepts and the tools in time series analysis. The course develops a comprehensive set of tools and techniques for analyzing various forms of time series and for understanding the current literature in applied time series econometrics. This course provides students with a basic knowledge and skill for macroeconomic time series. This course takes a “cookbook” approach and avoids a theoretical understanding of time series analysis. Through the course, students can learn several important concepts in time series analysis and how apply these concepts by using Eviews. Since the course does not explain how to use “EViews” itself, students should have a basic knowledge of Eviews.

Course Materials

There is no mandatory textbook. You may find that the followings are helpful.

- Applied Econometric Time Series, Walter Enders, Wiley.
- Econometric Analysis, William H. Greene, Prentice Hall
- Time Series Analysis, James D. Hamilton, Princeton

Grading

Problem sets count for 40% of your final grade and the take exam count for the remaining 60%.

Course Schedule:

Lecture 1-2: Stationarity Test: Unit-root tests

Example: Hysteresis in the unemployment rate

Lecture 3-4: AR and VAR 1

Example: The effect of monetary policy

Lecture 5-6: AR and VAR 2 (Identification)

Example: Demand shock vs. Monetary Shock (Blanchard and Quah, QJE)

Lecture 7-8: Co-integration and Error Correction Model

Example: Fiscal sustainability problem, Labor Participants and Unemployment

Lecture 9-10: GARCH model

Example: Inflation and inflation uncertainty