Spring 2010

# **Time Series Analysis** 洪嘉陽 Email: jhueng@nccu.edu.tw

## **Suggested Texts:**

Applied Econometric Time Series, Walter Enders. Time Series Analysis, James D. Hamilton.

#### **Course Description and Objectives:**

A study of selected topics and problems in time series econometrics emphasizing methodology for economic research measurements.

## **Grading:**

- 1) Homework Assignments: 40%.
- 2) Empirical Work: 60%.

Students have a choice between working on their original paper and duplicating a published paper.

- (A) Original paper:
  - i) A detailed proposal is due on 04/27/2010. It should include the title and the purpose of the paper, the theoretical and the regression models, the definitions of the variables, the estimation methodologies, and data resources (20%).
  - ii) Students present their drafts on 05/25/2010 (20%).
  - iii) The paper is due no later than 06/22/2010 (20%).
- (B) Duplication report:
  - i) A one-page proposal is due no later than 04/27/2010. It should include the title of the paper, the regression model, the definitions of the variables, data resources, and the software you will be using (20%).
  - ii) Students present their reports on 05/25/2010 (20%).
  - iii)The report is due no later than 06/22/2010. It should include discussions of the original paper and the differences, if exist, between your results and those in the paper. A data file and a program file should be attached (20%)

The students should use the methodologies introduced in this course to write the report or the paper. Take this course only if you can meet all the deadlines as scheduled. Any delay will result in a downgrade. No excuse will be acceptable. Plan to hand in the assignments before the due dates.

# Tentative Course Outline:

Weeks	Topics
1-4	Univariate Stationary Time Series Models
5	Maximum Likelihood Estimation
6	The Kalman Filter
7-8	Nonstationary Time Series Models
9	Student presentations (proposal)
10-11	VAR Model
12-13	Structural VAR Model
14-15	Unit Roots and Cointegration
16-17	GARCH Models
18	Student presentations (final paper/report).