TIME SERIES ANALYSIS
Wang yanan Institute for Studies in Economics, Xiamen University
(Second Semester, 2012-2013)

Teaching Team:
• Dr. LI Muyi (李木易, Instructor)
  Office: Rm B405, Economic Building;
  Email: limuyi@xmu.edu.cn;  Tel: 18020766330
  Mr. Yang yuan (杨远, Tutor)
  Email: yangyuancn200@yahoo.com.cn; 15060797653

Teaching and Assessment:
Teaching is composed of three hours of lecture and one tutorial class per week. Teaching materials will be sent to you before each lecturer for reference and review. Full attendance in lectures and tutorials is expected and interactive learning is encouraged by way of raising questions whenever needed in class or by email. Assessment includes a final written examination paper (40%), assignments, quiz, midterm test (40%) and class project (20%). Any assignment submission later than the due date will be penalized. Partially or wholly copied assignments will be penalized and/or reported as plagiarism.

Policy on absence from class:
If for any reason you are unable to attend class and must ask for leave, you should formally write reasons for your absence with original certificate provided.

Contents:
This course will touch upon the following topics: Stationary and the autocorrelation functions; linear stationary models; linear non-stationary models; model identification; estimation and diagnostic checking; seasonal models and forecasting methods for time series.

Reference Books:

Expected Learning Outcomes:
After following this lecture, you will be able to
• recognize a stationary vs non-stationary time series;
• understand some basic properties of commonly used time series models such as
AR (autoregressive), MA (moving average) and ARMA models;
- transform non-stationary time series into stationary ones;
- identify different time series models based on autocorrelation functions;
- fit a suitable AR, MA or ARMA model to real data using SAS (after transforming to stationarity if necessary);
- perform goodness of fit tests for such models;
- do forecasting with these fitted time series models.

Software:
SAS Software and R software.

Reading Materials: