

## **Course: Time Series Analysis**

**Instructor: To be arrange**

### **Course description**

This course is designed to introduce a variety of statistical models for time series and cover the main methods for analysing these models. The following topics will be cover; probability models for time series, stationarity, moving average (MA), autoregressive (AR), and ARIMA models.

### **References**

William W.S. Wei

Time Series Analysis: Univariate and Multivariate Methods  
Pearson; 2 edition, 2005

### **Course Schedule**

Introduction

Trend analysis

Smoothing method

Regression method

Probability theory

Stationary model

Stationary model

Autocorrelation function

Mid-term exam

Review on Calculus

Introduction to R language

Introduction to R language

Fourier series

ARMA model

ARMA model

Paper presentation

Paper presentation

Final exam

### **Course evaluation**

Passing score for graduate course is 70. In general, score is allocated between class attendance, homework, mid-term written exam, final written exam and student oral presentation. Course instructor reserves the right to adjust the grading scheme.