

California State University, Long Beach, Dept. of Math and Stat

STAT 580, Time Series Analysis

Note: Request for special need for accommodation of a University verified disability should be submitted within the first two weeks with all necessary documentation. If you received permission to register for a closed class section, only you can enroll for the course. It is the student's responsibility to complete the registration process before the dates indicated in the *Schedule of Classes*. Class attendance will be checked occasionally and each absence will result point deductions.

Instructor: Prof. Sung Kim, FO3 206, e-mail skim43@csulb.edu, phone 54320, office hours TBA.

Any office hour may be canceled due to illness or necessary appointments, and students should not therefore depend on the faculty being in his office for a particular office hour. Students thus should secure any necessary signatures or other requirements well in advance of any deadline.

Lecture: TTh 4:00-5:15, LA5 263, course web <http://www.csulb.edu/~skim43/stat580/stat580.htm>

Goal: The students should become familiar with both time domain and frequency domain approaches of the Time Series Analysis. Lectures consist of the theoretical background of the statistical methodologies and practical examples. A powerful PC-based package Applied Statistical Time Series Analysis (ASTSA) for window will be used during the course. You are required to download the package from the web, and install in your PC. No programming experience is required to use the package. If you prefer, you may use R, which can be downloaded from <http://www.r-project.org/>.

Textbooks: Required:

Shumway, R.H. and Stoffer, D. S. (2011). Time Series Analysis and Its Applications 3rd ed.. New York: Springer

Recommended:

1. W.S.Wei, (2006) Time Series Analysis: Univariate and Multivariate Methods, 2nd ed. Addison Wesley (ISBN 0-321-32216-9)
2. Brockwell and Davis (2002). Introduction to Time Series and Forecasting. 2nd edition. Springerfor all material in the lectures and readings unless told otherwise.

Homework assignments: Four homework will be assigned. The problem sets and due dates will be distributed during class. The problem sets involve both theoretical and practical parts.

Exams: We will have two in-class exams and one take-home final exam. Tentative schedule for the exams is TBA

Grading:

- 30% homework
- 20% Exam I
- 20% Exam II
- 30% take-home final

The distribution of the grades will follow a curve.