

CALIFORNIA STATE UNIVERSITY, HAYWARD
STATISTICS DEPARTMENT

Statistics 6871 Seminar in Graduate Probability and Statistics
Introduction to Time Series Analysis
Spring 1999

Lecture: MW 8:00-9:50, SC N207

Instructor: Prof. Eric A. Suess **Office Hours:** 7-8 M
ScN319 or by appointment
885-3879
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Required Text: Brockwell, P.J. and Davis, R.A., Applied Statistical Time Series Analysis, Springer-Verlag, 1996.

References: Chatterfield, C., The Analysis of Time Series: An Introduction, Chapman-Hall, 1996.
Shumway, R.H., Applied Statistical Time Series Analysis, Prentice-Hall, 1988.
Box, G.P. and Jenkins, G.M., Time Series Analysis, Forecasting and Control, Wiley, 1976.
Brockwell, P.J. and Davis, R.A., Time Series: Theory and Methods, Springer-Verlag, 1991.

Krause, A. and Olson, M., The Basics of S and S-Plus, Springer, 1997.
Spector, P., An Introduction to S and S-Plus, Duxbury Press, 1994.
Venables, W.N. and Ripley, B.D., Modern Applied Statistics with S-Plus, Springer-Verlag, 1994.

Data: <http://www-personal.buseco.monash.edu.au/hyndman/TSDL/>
<http://lib.stat.cmu.edu/>

Description: In this course we will cover an introduction to Time Series Analysis, the study of correlated variables observed in time. Descriptive methods of time series data will be introduced to describe trends, seasonal patterns and autocorrelation. Then the Frequency Domain and Time Domain approaches to time series analysis will be introduced. The class will be roughly split between the discussion of the introductory theory and computer applications of the methods to real data. Examples for the course will come from such diverse fields as economics, biology, medicine, seismology, and engineering.

Homework: There will be weekly assignments given each Monday at the beginning of class.

Grading:

Homework/Lab	25%
Midterms	25%
Project	25%
Final	25%

Prerequisites: Working knowledge of Probability and Statistics at the level of Stat. 3401 and 3402, and knowledge of Linear Algebra will be assumed.