

FALL 2014 - STAT 685 G100

APPLIED TIME SERIES ANALYSIS (3)*Delivery Method: In Person***COURSE TIMES + LOCATION:**

Mo 5:30 PM – 6:20 PM

BLU 9660, Burnaby

Th 4:30 PM – 6:20 PM

SSCK 9500, Burnaby

EXAM TIMES + LOCATION:

Dec 11, 2014

7:00 PM – 10:00 PM

EDB 7618, Burnaby

INSTRUCTOR:

Steven Thompson

thompson@sfu.ca

778-782-6591

Office: SC-K 10556

PREREQUISITES:

Prerequisite: : STAT 302 or STAT 305 or STAT 650 or permission of instructor. Open only to graduate students in departments other than Statistics & Actuarial Science.

Description

CALENDAR DESCRIPTION:

Introduction to linear time series analysis including moving average, autoregressive and ARIMA models, estimation, data analysis, forecasting errors and confidence intervals, conditional and unconditional models, and seasonal models.

COURSE DETAILS:**Outline:**

1. Autocorrelation, seasonality, and trends in time series and their impacts on standard statistical inference techniques.
2. Autoregressive models: definition, model formulation, and data analysis
3. Moving average models: definition model formulation, and data analysis
4. ARIMA models: definition, model formulation, and data analysis
5. Introduction to forecasting with linear time series models
6. Introduction to nonparametric fitting of trends and cycles to time series data

Grading

Assignments	20%
Midterm	30%
Final	50%

NOTES:

All grading is subject to change.

Materials

REQUIRED READING:

Required Textbook:

Time Series Analysis and Its Applications: With R Examples (3rd ed.) by Robert Shumway and David Stoffer. Publisher: Springer

Some copies of the book have been made available to purchase in the SFU bookstore

Book is also available on-line for free **here**

EZ version of book is also available for free **here**

DEPARTMENT GRADUATE NOTES:

Students with Disabilities:

Students requiring accommodations as a result of disability must contact the Centre for Students with Disabilities 778-782-3112 or csdo@sfu.ca

GRADUATE STUDIES NOTES:

Important dates and deadlines for graduate students are found here: https://www.sfu.ca/dean-gradstudies/current/important_dates/fall_2014.html. The deadline to drop a course with a 100% refund is the end of week 2. The deadline to drop with no notation on your transcript is the end of week 3.

REGISTRAR NOTES:

SFU's Academic Integrity web site <http://students.sfu.ca/academicintegrity.html> is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS