1/3/2019

FALL 2018 - STAT 685 G100 APPLIED TIME SERIES ANALYSIS (3) Class Number: 4664 Delivery Method: In Person

Course Outlines - Simon Fraser University

COURSE TIMES + LOCATION: Mo 5:30 PM – 6:20 PM SWH 10041, Burnaby

Th 4:30 PM – 6:20 PM BLU 9660, Burnaby

INSTRUCTOR:

Steven Thompson thompson@sfu.ca 778.782.6591 Office: SC-K10556

PREREQUISITES:

STAT 302 or STAT 305 or STAT 650 or BUEC 333 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:

Above grading is subject to change.

Materials

REQUIRED READING:

Required Textbook:

Time Series Analysis with Applications in R (2nd ed.) by Jonathan D. Cryer and Kung-Sik Chan. Publisher: Springer

Book is available on-line for free through the SFU Libarary E-Book ISBN: 978-0-387-75959-3 Hardcover ISBN: 978-0-387-75958-6 Softcover ISBN: 978-1-4419-2613-5 EXAM TIMES + LOCATION: Dec 15, 2018 7:00 PM – 10:00 PM SSCC 9001, Burnaby

GRADUATE STUDIES NOTES:

Important dates and deadlines for graduate students are found here: http://www.sfu.ca/dean-gradstudies/current/important_dates/guidelines.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

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