

SPRING 2015 - STAT 645 G100

APPLIED MULTIVARIATE ANALYSIS (3)*Class Number: 4804 Delivery Method: In Person***COURSE TIMES + LOCATION:**

Mo 12:30 PM – 2:20 PM

AQ 3150, Burnaby

We 12:30 PM – 1:20 PM

AQ 3150, Burnaby

EXAM TIMES + LOCATION:

Apr 25, 2015

8:30 AM – 11:30 AM

WMC 3520, Burnaby

INSTRUCTOR:

Qian Zhou

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778-782-9576

Office: SCK-10548

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 principal components, cluster analysis, and other commonly used multivariate techniques.

COURSE DETAILS:**Course Outline:**

1. Principal Components: Identification, use in multivariate regression, using R to perform the calculations. (~3 weeks)
2. Cluster Analysis: Survey of commonly used methods, computer calculations, graphical displays, and interpretation of results. (~3 weeks)
3. Other commonly used multivariate techniques subject to interest and expertise of the students and instructor. Examples include the following:
 - a. Ordination Techniques: Methodology and survey of common applications, computer calculations. (~2 weeks)
 - b. Discriminant Analysis: (~2 weeks)
 - c. Canonical Correlation Analysis: (~2 weeks)
4. Student Presentations of Substantive Applications. (~1 week)

Note: This course is being taught in parallel with STAT 445. Where feasible and appropriate, students in STAT 645 will be encouraged to present their research problems involving categorical data as active case studies for the class. Graduate students will also be required to submit a more extensive project related to their specialty.

Grading

Assignments	20%
Project	30%
Midterm	20%
Final	30%

NOTES:

All grading is subject to change.

Materials**REQUIRED READING:****Required Text:**

Applied Multivariate Statistical Analysis, 6th ed. by R.A. Johnson and D.W. Wichern. Publisher: Prentice Hall.

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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