STAT 445-3
Applied Multivariate Analysis

Spring 2013
Day Course

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

Instructor: Dr. Rick Routledge

Prerequisite:
STAT 285 or STAT 302 or STAT 305 or equivalent.

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

Calendar Description:
Introduction to principal components, cluster analysis, and other commonly used multivariate techniques. **Quantitative**

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)

Grading Scheme:

Assignments: 20%
Project: 20%
Midterm: 20%
Final: 40%

Grading is subject to change.

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Students are encouraged to review policies pertaining to academic integrity available on Student Services webpage at http://students.sfu.ca/academicintegrity.html

Students looking for a Tutor should send an email to stat@sfu.ca with "Tutor Request" in the subject line. Please only include information that you would like forwarded to our tutors mailing list.

Revised November 5, 2012