



# STATISTICS 802-4 MULTIVARIATE ANALYSIS

Fall 2005  
DAY COURSE

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*Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 604-291-3112 or csdo@sfu.ca*

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**Instructor: Dr. L. Weldon**

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**Textbook:**

*Applied Multivariate Statistical Analysis* by R.A. Johnson and D.W. Wichern. Publisher Prentice Hall. Fifth Edition.

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**Computer Software:**

You will need to be familiar with some Statistical Computing Package. R, S-Plus, SAS, JMP, and MINITAB are the popular ones.

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**Calendar Description:**

An advanced course in multivariate analysis. Factor analysis, discriminant analysis, principal components, canonical correlations. Multivariate regression and analysis of variance.

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**Meeting Schedule:**

Mon. & Wed: 9:30-11:20

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**Course Outline:**

1. Overview of Multivariate Analysis
  2. Statistical Distance and Eigen-Analysis
  3. Geometric Aspects of Multivariate Data
  4. Multivariate Data Analysis
  5. The Multivariate Normal Distribution
  6. Inference for Multivariate Means
  7. Multivariate Linear Regression
  8. Analysis of Covariance Structure
  9. Classification and Grouping
  10. Multidimensional Scaling
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**Grading:**

\*Term Work: 60%  
Final Exam: 40%

(\*Assignments, Quizzes, and Presentation.)

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*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. Please consult the General Guidelines of the calendar for more details.*

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Revised May 2005