STATISTICS 802-4
MULTIVARIATE ANALYSIS

Fall 2005
DAY COURSE

Instructor: Dr. L. Weldon

Textbook:

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

Computer Software:

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

Calendar Description:

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

Meeting Schedule:

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

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

Grading:

   *Term Work: 60%
     Final Exam: 40%

   (*Assignments, Quizzes, and Presentation.)

Revised May 2005