STATISTICS 4560
CONTINUOUS MULTIVARIATE ANALYSIS

This course provides a systematic exposition of the theory and methods for analyzing multivariate response variables. This course will require the use of popular statistical computing packages available for analyzing multivariate data such as R, SPSS-X, BMDP, and SAS, etc.

Text. *Applied Multivariate Statistical Analysis*, by R. A. Johnson and D. W. Wichern.

Marks. Set after discussion with the students but usually following the pattern: Assignments 20%, midterm exam 40%, and final exam 40%.

Calendar description. **4560 Continuous Multivariate Analysis** examines the multivariate normal distribution and its marginal and conditional distributions, distributions of non-singular and singular linear combinations, outline of the Wishart distribution and its application, in particular, to Hotelling's T-squared statistic for the mean vector, connection between likelihood ratio and Hotelling's T- squared statistics, a selection of techniques chosen from among MANOVA, multivariate regression, principal components, factor analysis, discrimination and classification, clustering.
Prerequisites: Mathematics 2051, Statistics 3410 and one of Statistics 3520, or Statistics 3411, or Statistics 3521.

Offered: *Contact the Deputy Head (Statistics) in the Department of Mathematics and Statistics for information regarding the scheduling of this course.*