This course teaches how to apply a variety of multivariate statistical methods to research data.

Learn how to:
- perform multivariate analysis of variance (MANOVA) and multivariate regression analysis
- perform canonical correlation and discriminant function analyses
- perform principal components analysis
- perform exploratory and confirmatory factor analysis
- use structural equation modeling.

Who should attend:
Statisticians, researchers and data analysts with a strong statistical background.

Prerequisites:
Before attending this course, you should:
- know how to create and manage SAS data sets
- have experience performing a linear model analysis using the REG or GLM procedures of SAS/STAT® software
- have completed and mastered the material covered in the Statistics 2: ANOVA and Regression course or completed a graduate-level course on general linear models.

Exposure to matrix algebra will enhance your understanding of the material. Some experience manipulating SAS data sets and producing graphs with SAS software is also recommended.
Analysis of Structure using the CALIS Procedure

- introduction to structural equation models
- confirmatory factor analysis
- regression path models
- structural equation models with latent variables
- structural models with repeated measurements.

Additional Data Topics

- evaluating assumptions for multivariate analysis.

Software addressed:

This course addresses the following software products:

- SAS/STAT
- SAS/GRAPH®.

A few demonstrations use SAS/IML® software although it is not required for most of the activities in the course.