

MASTER'S SEMINAR ANNOUNCEMENT
Department of Statistics

**Applied Multivariate Methods: Principal Components
and Factor Analysis**

Friday, August 1, 2003 at **11:15am**
Eckhart Hall, Room 110, 5734 S. University Avenue

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ABSTRACT

Multivariate data techniques, such as analysis of Principal Components (PCA) and Factors (FA) are widely used by physical, social, behavioral and biological researchers. Characteristics of interest simultaneously recorded on a set of statistical units selected either by observational or experimental methodologies are in principle, the required information for these techniques to be applied. Largely responsible for the multivariate methods' increasing usage is the access to powerful personal computers and ease of application. The use of PCA and FA are criticized by some, however, when they are used for more than exploratory purposes. The aim is to present the concepts and applications of multivariate methods at a level that is understandable by readers with supporting mathematical and statistical knowledge. The implementation of the methodologies in SPLUS/R and SPSS is thoroughly described. PCA and FA are applied to a survey of US travelers on the image of destinations in Mexico.