Introduction to Structural Equation Modeling

Dr. Brian K. Miller
Associate Professor of Management
Adjunct Professor of Psychology

Dr. Gail R. Ryser, Director
Testing, Research-Support, and Evaluation Center

Structural equation modeling techniques are based upon classical test theory and make use of both directly observed measures and unobserved latent constructs. Most educational, behavioral, and social research makes use of latent variables. Structural modeling techniques allow researchers to model relationships and examine the impact of random and systematic error, thereby disattenuating the relationship between latent constructs, most of which are imperfectly measured. The current training seminar will cover selected introductory topics in structural equation modeling and will provide hands-on training in the following areas:

- Model Specification and Identification
- Estimation Methods
- Path Analysis
- Confirmatory Factor Analysis
- Full Structural Equation Modeling
- Mediation Analysis
- Basics of AMOS software

Prerequisites:

1. Intermediate or above understanding of regression analysis (critical).
2. Experience using at least one statistical software package (e.g. SPSS, SAS, stata, M-Plus, Lisrel, AMOS, EQS).
3. Experience manipulating data (e.g., recoding reverse scored items, computing scale composites, merging data files)