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Summary

The course is designed to provide scholars with a basic understanding of structural equation modeling (SEM). Special attention is given to the translation of theoretical expectations into SEM, the interpretation of results in SEM analyses and the general use and misuse of SEM in the social sciences. While the course is predominantly designed to give you the knowledge of SEM we start with a quick introduction of necessary foundations like correlations, covariances, regression and factor analysis. Applications will include path models, factor analyses and structural equation models, and, if time allows, a bit of multilevel SEM. The goal of the course is to offer a basic introduction and the foundation for students to start using and critically assessing SEM and also have the ability to independently discover and master advanced SEM statistical topics.

Upon completion the students will have a basic conceptual understanding of SEM and its statistical foundations. Students will be able to critically assess the appropriateness of such techniques in their own and other people's research and conduct SEModeling themselves to the highest academic standards.

Pre-requisites for the Class

The class is open to experienced researchers (advanced MA students, PhD students and interested faculty) as long as their prior statistical training allows. Anyone entering the course should be an experienced user of regression, know the basics of inferential statistics and should have heard of factor analysis, at least at the informed consumer level.

Please Bring Your Computers with R and Lavaan installed.

WORKSHOP SCHEDULE

Week	Topic
Sept 27 Session 1	Review of Regression and Factor Analysis
Sept 27 Session 2	Intro to SEM
Sept 27 Session 3	SEM Fundamentals and Path Models
Sept 28 Session 1	Measurement Models with Multiple Indicators
Sept 28 Session 2	Measurement Models with Fewer Indicators
Sept 28 Session 3	Measurement Models II
Oct 1 Session 1	Structural Models
Oct 1 Session 2	More Structural Models
Oct 1 Session 3	Multiple Groups
Oct 2 Session 1	Moderation and Mediation and Non-normality
Oct 2 Session 2	Weird Models (Growth Curve, Cross-Lag and ACE)
Oct 2 Session 3	Big Picture: Thinking Theoretically. Formative vs Reflective Models

Texts

Mayerl, Jochen and Levente Littvay (forthcoming) *Structural Equation Modeling.* SAGE

Additional Resources

Kline, Rex B. (2016) *Principles and Practice of Structural Equation Modeling. 4th ed.* The Guilford Press

Finkel, Steven E. (1995) *Causal Analysis with Panel Data.* SAGE

Singer, Judith and John Willett (2003) *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence.* Oxford University Press