

# Course Syllabus Causal Modeling Spring, 2012

## *Instructor*

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## *Time & Place*

Wednesdays, 7:40pm – 10:20pm  
Room 208, GSE

## *Office Hours*

By appointment  
Room 346, GSE

## *Textbooks*

1. Principles and Practice of Structural Equation Modeling (Kline).
2. SEM with the SIMPLIS Command Language (Jöreskog & Sörbom)

## *Course Description*

This course will build on multiple regression analysis with an introduction to structural equation modeling. The basic concepts of path analysis, latent variables, measurement models, and structural models will be covered. This includes confirmatory factor analysis, structural models, multi-group models, latent growth curve models, and model fit. The course will employ an older version of LISREL, which requires some patience. Regression analysis is the foundation of SEM. I will only give a brief overview of regression and will not cover this material during office hours. Not all the material covered in class is contained in the textbook. Missing class can place you at a serious disadvantage. The goal of the course is to offer fundamental knowledge and techniques SEM, and let you bring home with skills for analyzing and evaluating the data using SEM by your own.

## *Evaluation*

- Your participation in the course will be evaluated by the annotated analyses for your individual class project and a class presentation. The 10 minute presentation will be structured. You are required to obtain a data set and have the data set **IN WORKING ORDER** by March 22. This data should be relevant to your interests, and you are responsible for understanding the substantive issues involved. This means all problems, missing data issues, permissions, must be resolved – the data set must be ready for processing. The data set must contain at least 200 observations and 20 variables.
- No grades of “Incomplete” will be assigned for this course.
- Your final course grade will be determined as the total points assigned to the quality and difficulty of your model and analysis, and final presentation.

### *Things to keep in mind*

- I will have to ask you to leave class if I determine you are surfing online, except during the break.
- You are expected to make arrangements to acquire all materials and information covered during your absence from any class. I will not cover missed material during office hours.

### *Policy on Academic Integrity*

Please refer to the Policy on Academic Integrity for Undergraduate and Graduate Students at <http://academicintegrity.rutgers.edu>. I will follow the policy strictly.

### *Class Schedule*

The following class schedule is subject to change if necessary. Note that reading assignments must be completed prior to each lecture.

<b>Date</b>	<b>Topic(s)</b>	<b>Readings</b>	<b>Due</b>
Jan 18	Introduction + reviews	K1, K2, K3	
Jan 25	Path Analysis	K4,K5	
Feb 1	Introduction to SIMPLIS	JS1-3	
Feb 8	Model Fit	K6	
Feb 15	CFA	K7	
Feb 22	Measurement+ Structural Models	K8,JS4-5	
Feb 29	Measurement+ Structural Models	K8,JS6-9	
Mar 7	Spring break		
Mar 21	Mean & Latent Growth Models	K10,TBA	Data set
Mar 28	Mean & Latent Growth Models	K10,TBA	
Apr 4	SIMPLIS Lab	JS1-9	
Apr 11	Multi-Sample models	K11, JS10	
Apr 18	Multi-Sample models	K11,JS11-12	First analysis
Apr 25	SIMPLIS Lab		
May 2	Presentations		Final analysis