

**PSYC 6300 001/PSYC 5389 001
STATISTICAL MEDIATION ANALYSIS
FALL 2009**

I BASIC INFORMATION

Instructor: Dr. Lauri Jensen-Campbell
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Office hours: Tuesday 10-10:50A; Thursday 2-3 or by appt.
Meeting time: Tuesdays and Thursdays 12:30-1:50P

II PURPOSE

Course Description: This course is intended to provide a graduate level overview of statistical mediation analysis as a general data-analytic technique. The course will emphasize the conceptual underpinnings of the techniques rather than mathematical computations. Students should already be familiar with general linear models and moderated multiple regression. Indeed, if you have not taken PSYC 5389 (Moderated Multiple Regression) with me or the new PSYC 5406/5407 sequence (with Dougall/Ewen /Jensen-Campbell), it is advisable that you sit in on the new PSYC 5406/5407 sequence before taking this seminar.

Course Learning Goals and Objectives: This course is designed to provide hands-on experience in conducting statistical mediation analysis with SPSS-X (PASW) and AMOS. Students are also encouraged to try to work out problems in LISREL and EQS. Computer applications of the statistical techniques that are covered will be emphasized. Homework exercises will be included to illustrate designs, analyze data, and provide experience in writing in APA style. Of course, it is impossible to touch upon all of statistical issues related to statistical mediation analysis. However, in combination with the readings, we will obtain an overview of the basic statistical techniques used in these analyses.

III COURSE REQUIREMENTS

REQUIRED TEXTS/MATERIALS

MacKinnon, D.P. (2008). Introduction to Statistical Mediation Analysis. New York: Lawrence Erlbaum Associates.

SPSS-X (or PASW) GradPack, which includes AMOS: You can purchase this pack at the UT Arlington computer store (4-year license) or you can buy a shorter license for 6 or 12 months at <http://www.e-academy.com/>.

ADDITIONAL REQUIRED READINGS

There will be additional required readings assigned throughout the semester that are not part of your required textbook.

Students can also try assignments in LISREL, EQS, or MPLus (freeware versions available at <http://ssc.utexas.edu/world/stat/Freeware.html>).

LISREL student version (free download at <http://www.ssicentral.com/lisrel/student.html>)

AMOS student version (free download at <http://amosdevelopment.com/download/>).

EQS student version (<http://www.mvsoft.com/demos.htm>)

MPLUS (<http://www.statmodel.com/demo.shtml>)

RECOMMENDED READINGS OR WEBSITES

David Kenny's Website: <http://davidakenny.net/kenny.htm>

Preachers Papers and Programs: <http://www.people.ku.edu/~preacher/>

MacKinnon's Website for Mediation: <http://www.public.asu.edu/~davidpm/ripl/mediate.htm>

Dr. Alan Reifman's SEM Course: <http://reifman-sem.blogspot.com/>

STRONGLY RECOMMENDED CLASSROOM MATERIALS

Bring your laptop or netbook to work on examples in class (can share with classmate if they agree).

EXAMS (PSYC 5389 STUDENTS ONLY)

There will be two examinations. Both exams will be entirely take-home. In addition, you will be required to write up your answers in APA style.

HOMEWORK (ALL STUDENTS)

It is critical that you learn how to conduct and interpret mediation analyses using computer software. The purpose of the homework assignments is to ensure that you are capable of carrying out the analyses discussed in class and that you are able to interpret these analyses. Your answers will not be formally graded, and an answer sheet will be provided when the exercise is turned in. Your responses will be assigned a number from 0 to 5 with 5 being the highest and 0 being reserved for assignments that were not turned in. To achieve the full 5 points, you must provide a clear, correct answer that is conveyed in a professional manner fitting of graduate level work. Each homework assignment will be completed by the following week in which it assigned. No late assignments will be accepted.

PROJECT (ALL STUDENTS)

You will be required to find a data set related to your field of study that can be analyzed using statistical mediation analysis procedures. *That is, you are to either use your own data or data available through an advisor or through a public archive (e.g., <http://www.icpsr.umich.edu/>).* The purpose of the paper is to provide

hands-on experience in conducting these analyses and interpretation within your research area. A 10-15 page, ***stapled*** write-up ***in APA style*** is due on the day listed on your syllabus. The paper will include all sections required in an APA paper (i.e., title page, abstract, introduction, method, results, discussion, references, tables, and figures). Statistical printouts should be included in an appendix. *Projects not written in APA style will be penalized a LETTER GRADE.*

You are also expected to give a brief presentation (5-7 minute) on your project during the last week of class.

III POINT DISTRIBUTION AND GRADING POLICY

PSYC 5389 STUDENTS

Homework (5 points apiece - 10 Assignments)	50
Paper/Presentation	100
Class Participation/Quizzes	50
Midterm	50
Final	50

Total	300

PSYC 6300 STUDENTS

Homework (5 points apiece - 10 Assignments)	50
Paper/Presentation	100
Class Participation/Quizzes	50

Total	200

GRADING

90% - up	A
80%-89%	B
70% -79%	C
65-69%	D
Below 65%	F

V COURSE OUTLINE


I reserve the right to modify the schedule and assignments based on how the course is proceeding. If I feel that you are not reading, I may also introduce weekly quizzes as well.

Wk	Date	Lecture Topic	Reading Assignments (Additional Readings will be added throughout the semester)	Lab Exercises/Assignments	Assignment Due
Theoretical Background & Regression Models					
1	T 8/25	Introduction to Statistical Mediation	MacKinnon – Chapter 1 MacKinnon, Fairchild, & Fritz (2007) Baron & Kenny (1986) Spencer, Zanna, & Fong (2005)		
	R 8/27				
2	T 9/1	Application of the Mediation Model	MacKinnon – Chapter 2 Holmbeck (1997) Frazier, Tix, & Barron (2004) Shrout & Bolger (2002) Taylor & Fiske (1981)	HW1: MacKinnon Exercise 1.3, 1.7, 2.1, 2.5, 2.6	9/10
	R 9/3				

3	T 9/8	Single Mediation Model	MacKinnon – Chapter 3 Preacher & Hayes (2004) MacKinnon, Lockwood, West, & Sheets (2002) MacKinnon, Krull, & Lockwood (2000)	HW2: MacKinnon 3.2	9/17
	R 9/10				
4	T 9/15	Single Mediator Model Detail/Effect Sizes	MacKinnon – Chapter 4 Hoyle & Kenny (1999) Hamilton (1987)	HW3: MacKinnon 4.3 (enter data in SPSS; use SPSS Macro to help generate effect sizes, etc.; attach printout with HW)	9/24
	R 9/17				
5	T 9/22	Multiple Mediator Model	MacKinnon – Chapter 5 Preacher & Hayes (2008)	HW4: MacKinnon 5.3; Analysis and Interpretation of data set (to be provided) using SPSS Macro.	10/1
	R 9/24				
PATH MODELS					
6	T 9/29	Path Analysis Models	MacKinnon – Chapter 6 Make sure you have AMOS	HW5: Path Analysis TBA	10/8
	R 10/1				

CONFIRMATORY FACTOR MODELS/STRUCTURAL EQUATION MODEL

7	T 10/6	Latent Variable Mediation Models/SEM Basics	MacKinnon – Chapter 7 Tabachnick & Fidell – Chapter 14	HW6: SEM Basics TBA	10/15
	R 10/8				
8	T 10/13	Confirmatory Factor Models (SEM)	Schreiber et al (2006) Arbuckle (2007) – Example 8 (pp 139-146)	HW7: CFA TBA	10/22
	R 10./15				
9	T 10/20	Developing Structural Equation Models		HW8: SEM TBA	11/5
	R 10/22				
10	T 10/27	Developing Structural Equation Models	Barrett (2007)		
	R 10/29				

11	T 11/3	Reporting SEM Research /Model Validation		HW9: SEM II TBA	11/12
	R 11/5				
12	T 11/10	Mediation and Moderation	MacKinnon – Chapter 10 Preacher, Rucker, & Hayes (2007) Muller, Judd, & Yzerbyt (2005)	HW10: Mediated Moderation TBA	11/24
	R 11/12				
13	T 11/17	Mediation in Categorical Data	MacKinnon – Chapter 11	NO HOMEWORK – WORK ON PAPER	
	R 11/19				
14	T 11/24	Mediation in Categorical Data		NO HOMEWORK – WORK ON PAPER	
	R 11/26	THANKSGIVING	NO CLASS		
15	T 12/1	Paper Presentations		NO HOMEWORK – WORK ON PAPER	Papers due 12/3
	R 12/3				
16					