

**Introduction To Statistical Modeling In Psychology:
The General Linear Model**

TIME AND PLACE

Lecture: Wednesday, 10:10-12:00 Room 200B Schermerhorn Hall

Lab: R 10:00-12:00 200B Schermerhorn Hall

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TA			
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COURSE OBJECTIVES

This course is designed to be a practical introduction to the use of General Linear Models (GLM) in data analysis. In particular, the course will emphasize ANOVA and regression analyses, highlighting the fundamental relations between the two approaches.

COURSE REQUIREMENTS

Students will read the assigned text, Kutner et al. (2005), as well as other assigned articles and chapters from other texts. They will complete weekly data analysis assignments and submit brief written reports of results. Using a problem and a data set of their own choosing, students will design and carry out a GLM analysis and report their findings to the class in a seminar format. These findings will also be written as a methods and results section of a formal scientific paper.

REQUIRED TEXT

Kutner, M.H., Nachtsheim, C.J., Neter, J., & Li, W. (2005). *Applied Linear Statistical Models*. (5th ed.). New York: McGraw-Hill.

COURSE OUTLINE

Date	Topic
9/5	Normal theory; Least squares; The t-test
9/12	The correlation coefficient; Simple regression
9/19	The general linear model
9/26	Interaction between continuous IVs in GLM
10/3	Factorial ANOVA
10/10	Effect size and power
10/17	Types of coding in GLM
10/24	NO CLASS
10/31	Contrasts in GLM
11/7	A two-equation linear system
11/14	Assessing mediation in a two-equation system
11/21	Scaling and transforming X and Y
11/28	Generalized linear models
12/5	Summary; Begin class presentations
Finals	Class presentations continued

OTHER RECOMMENDED TEXTS

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied Multiple Regression/Correlation analysis for the Behavioral Sciences*. (3rd. ed). Mahwah, NJ: Lawrence Erlbaum Associates.

ADDITIONAL READINGS AND REFERENCE LIST WILL BE PROVIDED ON COURSEWORKS.