

SOCI 6630
Analysis and Interpretations of Sociological Data II
Spring 2009

Instructor:	Dr. Tom McNulty	Office:	Baldwin Hall 312
Office Hours:	MW 3:30-4:30 pm & by appointment	Phone:	542-3194
Class schedule:	TTH 12:30-1:45 (period 74)	E-mail:	tmcnulty@uga.edu
Classroom:	Baldwin Hall 114A		

Course Overview: This course provides an introduction to regression analysis. We begin with a review of bivariate regression, and then consider extensions to multiple regression models. Topics include regression assumptions and diagnostics, and specific applications including dummy variable regression, interaction effects, logistic regression analysis, and multilevel modeling. The class is primarily centered on the logic and computer application of regression, rather than the underlying mathematics. Students directly apply the material through computer assignments and a research paper. This requires learning SPSS (*Statistical Package for the Social Sciences*). Time in class is used to familiarize students with the program. The principal objective of the course is to provide students with a set of practical tools and skills that can be applied to a variety of analytical questions and situations.

Required Readings: The course is primarily organized around the reading of several papers from the Sage Series on Quantitative Applications in the Social Sciences. These provide a good review of the essentials and are handy references to keep on the book shelf. Additional readings will be available in the Baldwin Hall mail room, and are listed below in the course outline. The following are available at the University bookstore:

Lewis-Beck, Michael S. 1980. Applied Regression: An Introduction. Sage.
Berry, William D. and Stanley Feldman. 1985. Multiple Regression in Practice. Sage.
Hardy, Melissa A. 1993. Regression With Dummy Variables. Sage.
Luke, Douglas A. Multilevel Modeling. Sage.
Kim, Jae-On and Charles W. Mueller. 1978. Introduction to Factor Analysis. Sage.

Course Requirements: Students are required to attend class. Course grades are based on a series of computer assignments and a quantitative research paper on a topic of your choice. The computer assignments and research paper will contribute 40 and 60 percent, respectively, toward your final grade. Both will require using SPSS to apply techniques discussed in class. More will be said about the research paper in class, but you must begin thinking about a topic early. The paper should be journal length and written as if submitting for publication (numerous students have presented their papers at professional meetings). Research papers will be due at the end of the semester. I have several data sets that you are welcome to use, although students are strongly encouraged to find and use their own data. I will illustrate in class how to find and download data sets from sites on the internet (e.g., ICPSR). If you decide to use your own data, clear it with me early in the course.

COURSE OUTLINE

I. The Regression Model

Lewis-Beck, Applied Regression.

II. Regression Assumptions

Berry and Feldman, Multiple Regression in Practice.

McNulty, 2001. "Assessing the Race-Violence Relationship at the Macrolevel: The Assumption of Racial Invariance and the Problem of Restricted Distributions." *Criminology* 39(2):301-324.

III. Dummy Variable Regression Analysis

Hardy, Regression With Dummy Variables.

McNulty, 1999. "The Residential Process and the Ecological Concentration of Race, Poverty, and Violent Crime in New York City." *Sociological Focus* 32(1):25-42.

IV. Interaction Effects

Aiken and West, 1991. Multiple Regression: Testing and Interpreting Interactions. Sage. Chapters 2, 3 (p. 35-48), and 7.

Hardy, Regression With Dummy Variables (pp. 29-52).

McNulty and Holloway, 2000. "Race, Crime, and Public Housing in Atlanta: Testing a Conditional Effect Hypothesis." *Social Forces* 79(2):707-729.

V. Logistic Regression Analysis

"Logistic Regression Analysis: Procedure Logistic Regression." Chapter 2, SPSS Advanced Statistics Users Guide.

McNulty and Bellair, 2003. "Explaining Racial and Ethnic Differences in Adolescent Violence: Structural Disadvantage, Family Well-Being, and Social Capital." *Justice Quarterly* 20(1):201-231.

Huey and McNulty, 2005. "Institutional Conditions and Prison Suicide: Conditional Effects of Deprivation and Overcrowding." *The Prison Journal* 85(4):490-514.

COURSE OUTLINE

VI. Introduction to Multilevel Modeling

Luke, Multilevel Modeling.

Bellair and McNulty. 2009. "Gang Membership, Drug Selling, and Violence in Neighborhood Context." *Justice Quarterly*.

Rowan, Raudenbush, and Kang, 1991. "Organizational Design in High Schools: A Multilevel Analysis." *American Journal of Education* (Feb.):238-266.

VII. Introduction to Factor Analysis and Reliability

Kim and Mueller, Introduction to Factor Analysis.