Getting in touch  
e-mail: aysam@fiu.edu  
Office: SIPA 311  
Tel: 305/348-2258,  
Office hours: M 10:00 am to 11:00 am and 2:00 pm to 3:00 pm; or by appointment  

What it’s about  
This course explores how to analyze social and policy data by means of multiple regression—a statistical method for examining how an outcome variable depends on several explanatory variables—which is a basic tool for quantitative social and policy research. The course’s prerequisite is SYA 6316 (“Research Methods I”) or an equivalent course.  

Required books  
Allison, *Multiple Regression: A Primer* (Pine Forge, 1999);  
Pampel, *Logistic Regression: A Primer* (Pine Forge, 2000);  
King et al., *Designing Social Inquiry*.  
There will also be readings from the following books:  
Ragin, *Constructing Social Research*;  
Moore & McCabe, *Introduction to the Practice of Statistics*;  
Agresti & Finlay, *Statistical Methods for the Social Sciences*.  

Required software  
The previous semester’s materials presented an introduction to *Stata*, the statistical software program that will be integral to this course. Students will be expected to have routine access to a professional version of *Stata-12* (available through eLabs: [http://elabs.fiu.edu](http://elabs.fiu.edu)). We will continue to cover the basics of using *Stata*.  

We will also learn how to use the program via the free, downloadable resources for learning Stata that are available at the following web sites of UCLA-Academic Technology Services:
Web resources for learning Stata-12: http://www.ats.ucla.edu/stat/seminars/

Specifically important for this course is the four-chapter “web book” (with practice data) on using Stata for regression analysis: Chen et al., Regression with Stata http://www.ats.ucla.edu/stat/stata/webbooks/reg/default.htm

**Projects, Exams & Grades**

Final grades will be based on the following:

- **Project. It will be worth 25% of the final grade.** The project will combine assigned problems and questions with regression analysis of a data set. Every student will select in consultation with the instructor a data set to analyze for the project.

- **Presentation. It will be worth 25% of the final grade.** The presentation will focus on a critique of a quantitative research paper published in peer-review journal in an area of your interest.

- **Two exams. Each of these will be worth 25% of the final grade.**

**Tentative Schedule**

**Jan 9: Analyzing Bi-variate relations**
Review of Moore & McCabe, chapter 1 to chapter 9

**Jan. 23: What is regression analysis?**
Mendenhall & Sincich, chapter 1, “A Review of Basic Concepts”;
Mendenhall & Sincich, chapter 2, “Introduction to Regression Analysis”;
Mendenhall & Sincich, chapter 3, “Simple Linear Regression”;
Allison, chapter 5, “Bivariate Regression”;

**Assignment:**
(1) Select an article using OLS regression from either American Sociological Review, American Journal of Sociology, or Social Forces since the year 2000. Briefly summarize how the research problem is conceptualized and how the data are described and analyzed. Then copy (by pen or pencil) the format of the main tables that describe the data and report the regression results.
(2) Use StatTransfer to transfer the data from one of the Mendenhall & Sincich problems into Stata.
(3) Do Stata assignments #1 (“Estimate tables”) and #2 (“Log files”).

**Jan. 30: Multiple regression**
Allison, chapter 1, “What Is Multiple Regression?”
Allison, chapter 2, “How Do I Interpret Multiple Regression Results?”
Mendenhall & Sincich, chapter 4, “Multiple Regression”
*Recommended: Chen et al., Regression with Stata, chapter 1, “Simple and Multiple Regression”*

**Assignment:** (1) Mendenall & Sincich problems
Jan 6: Model building
Allison, chapter 3, “What Can Go Wrong with Multiple Regression?”
Allison, chapter 8, “How Can Multiple Regression Handle Nonlinear Relationships?”
Mendenhall & Sincich, chapter 5, “Model Building”
Chen et al., Regression with Stata, chapter 3, “Regression with Categorical Predictors”

Assignment: (1) Mendenhall & Sincich problems,

Feb. 13: Selecting variables
Mendenhall & Sincich, chapter 6, “Variable Screening Methods”
King et al., Designing Social Research, chapter 4, “Determining What to Observe”

Assignment: (1) Mendenhall & Sincich problems

Feb. 20: Regression diagnostics, part 1
Allison, chapter 6, “What Are the Assumptions of Multiple Regression?”
Allison, chapter 7, “What Can Be Done about Multicollinearity?”
Mendenhall & Sincich, chapter 7, “Some Regression Pitfalls”
King et al., Designing Social Inquiry, chapter 5, “Understanding What to Avoid”
Chen et al., Regression with Stata, chapter 2, “Regression Diagnostics”

Assignment: (1) Mendenhall & Sincich problems

Feb 27: Regression diagnostics, part 2
Mendenhall & Sincich, chapter 8, “Residual Analysis”

Assignment: (1) Mendenhall & Sincich problems •

Mar 5: MID-TERM EXAM

Mar 19 & 26: Regression with categorical dependent variables, part I— (binary dependent variables)
Moore & McCabe, chapter 15, “The Logistic Regression Model”
Pampel, chapter 1, “The Logic of Logistic Regression”;
Pampel, chapter 2, “Interpreting Logistic Regression Coefficients”
Pampel, chapter 3, “Estimation and Model Fit”
Long & Freese, chapter 4, “Models for Binary Outcomes”
Chen et al., Regression with Stata, chapter 4, “Beyond OLS”

Assignment:
(1) Select an article using logistic, ordinal, or multinomial regression from either American Sociological Review, American Journal of Sociology, or Social Forces since the year 2000. Briefly summarize how the research problem is conceptualized and how the data are described and analyzed. Then copy (by pen or pencil) the format of the main tables that describe the data and report the regression results.
(2) Moore & McCabe problems
Apr. 2 & 9: Regression with categorical dependent variables, part II (ordinal & nominal dependent variables)
Long & Freese, chapter 5, “Models for Ordinal Outcomes”
Long & Freese, chapter 6, “Models for Nominal Outcomes”
Chen et al., Regression with Stata, chapter 4, “Beyond OLS”
Recommended: King et al., Designing Social Inquiry, chapter 6, “Increasing the Number of Observations”

Project Due

Apr 16: REVIEW

Week of April 23: TBA - FINAL EXAM