

**Political Science 6918: Seminar in Research Methods
(Spring 2009, Section 01)**

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Course Description and Objectives

This is the second course in research methods for graduate students in the Political Science graduate program. The purpose of the class is to provide you with a better understanding of how to use quantitative techniques and how to interpret the results of quantitative analysis.

Regardless of your field of study, quantitative research plays an increasingly large role (and in many fields a dominant role) in the discipline of political science. The syllabus provides a general plan for the course; deviations may be necessary.

In this course we will learn about various methods of quantitative analysis. While we will read work that uses these techniques, we will also learn by using these techniques ourselves. The frequent homework assignments, some requiring you to compute various statistics by hand and others requiring you to use SPSS (a statistical software package used by many political scientists) to compute statistics, will allow you to practice conducting various statistical tests and interpreting your results.

For this course, I assume that you understand larger issues of research design and measurement, how to compute and interpret measures of central tendency and dispersion, and the basics of hypothesis testing. We will review some of this material in our first class period. After this brief review, we will quickly work our way through different types of hypothesis tests using Student's t distribution, measures of association including Pearson's correlation, and bivariate regression. Then, we'll focus on multiple regression analysis. Specifically we will discuss the assumptions of the classical linear regression model, the consequences of violating these assumptions, diagnostic techniques for identifying when these assumptions have been violated, and corrective measures. Using multiple linear regression analysis, you will complete your own original research in political science.

Texts and Materials

There are three required texts for the course which are available at the FIU Bookstore as well as several recommended readings which can be purchased from online bookstores if you choose to do so. In addition, you will be asked to read selections from political science journals' most of which are available on-line from JSTOR (one of the FIU library's databases of full-text journals). From the library's web page you can determine which on-line database provides full-text access to a particular journal (<http://library.fiu.edu/files/LibraryForms/ejbook.htm>).

Required Texts

Agresti, Alan, and Barbara Finlay. 2007. *Statistical Methods for the Social Sciences*, 4th ed. Upper Saddle River, NJ: Pearson.

Berry, William D. 1993. *Understanding Regression Assumptions*. Newbury, CA: Sage Publications.

Kennedy, Peter. 2008. *A Guide to Econometrics*, 6th ed. Cambridge, MA: MIT Press.

Recommended Texts

Achen, Christopher H. 1982. *Interpreting and Using Regression*. Newbury, CA: Sage Publications.

Aldrich, John H., and Forrest D. Nelson. 1984. *Linear Probability, Logit, and Probit Models*. Newbury, CA: Sage Publications

Lewis-Beck, Michael S. 1980. *Applied Regression: An Introduction*. Newbury, CA: Sage Publications.

Additional Materials

In this course, we will use a statistical software package, SPSS, to conduct statistical analysis. A recent version of SPSS is available in the Political Science Department's computer lab. You may also wish to purchase your own copy of the program to install at home from <http://www.journeyed.com> which offers discounted rates on software for registered students. The SPSS grad pack for students is about \$200 and is available in Windows (<http://www.journeyed.com/itemDetail.asp?itmNo=84881573R>) and Mac (<http://www.journeyed.com/itemDetail.asp?itmNo=84921571R>) platforms.

You will need to be somewhat familiar with SPSS at the start of the course. If you are not familiar with SPSS or would like an SPSS guide to refer to, you may want to purchase the following guide:

Shannon, David M., and Mark E. Davenport. 2001. *Using SPSS to Solve Statistical Problems: A Self-Instruction Guide*. Upper Saddle River, NJ: Prentice Hall.

Evaluation

Your final grade for this class will be based on your performance on several graded homework assignments and your final research project.

Homework assignments	60 percent
Research project	40

The grading scale for this course is:

A	94 - 100.00	B-	80 - 81.99	D+	68 - 69.99
A-	90 - 93.99	C+	78 - 79.99	D	62 - 67.99
B+	88 - 89.99	C	72 - 77.99	D-	60 - 61.99
B	82 - 87.99	C-	70 - 71.99	F	0 - 57.99

Homework Assignments (60 percent)

You will be asked to complete a number of graded homework assignments throughout the semester. Some assignments will require you to compute statistics by hand. Be sure to show your work in these assignments. Other assignments will require you to use SPSS and specific data to perform specific statistical analyses. For these assignments, you will present and interpret your results. While your computational assignments can be hand-written, your SPSS-based assignments must be typed with appropriate tables and figures included and with your SPSS output attached to the assignment. While you should feel free to consult with your classmates on the ungraded homework assignments, graded homework assignments should be your own individual work.

As with all written work in this class, please conform to the American Political Science Association's (APSA) *Style Manual for Political Science* and University's Code of Academic Integrity. You can purchase a copy of APSA's *Style Manual for Political Science* at <https://www.apsanet.org/forms/pubs-form-1.cfm>. You can use the APSA style guide and journal articles to guide you when creating tables and figures. Your average grade on all the graded homework assignments will comprise 60 percent of your final grade in the class.

Research Paper (40 percent)

For this project, you will complete an original research paper. For this project you are required to conduct, report, and interpret the results of an original multiple regression analysis. Your finished paper must include an introduction, a literature review, a theory with a least one testable hypothesis, a description of the data and methods used to test the hypothesis, a section presenting and interpreting the results of your multiple regression analysis, and a conclusion. For this assignment, you can begin with a research design that you developed in a previous class or conduct a new analysis for a paper you have previously written in another course. If you choose to do this, you must submit the original research design or paper to me so that I can verify that your analysis will be original for this paper. If you are pursuing a research paper in another class this semester, you can write a paper for this class on a similar topic and use similar data; however, the analysis and discussion of results must be different for each paper. If you plan to write research papers for two courses in the same semester on a similar topic and/or using similar data you must inform both professors so that both professors can be assured that you are pursuing original research for both classes. If you do not have a research design to implement or a previous paper to substantially revise, you can replicate the results of a published article using the same data or new data.

Whatever your choice, you will need to acquire your data, enter or read it in to SPSS, conduct your regression analysis, perform diagnostic tests, and re-analyze the data using corrective measures when appropriate. In the results section of your paper, you should present your results in tables and graphs and interpret and discuss your results. You should use the APSA style guide and the results sections of journal articles to help guide you as you complete your final project.

You must carefully document all your sources using the APSA formal method of citation and reference. Your final paper must be typed in 12-point font, double-spaced, and have 1-inch margins on all sides. Make sure to include page numbers. Do not include a cover page; simply type your name, the date, and the course and section numbers in the upper, left-hand corner of the page. The final paper comprises 40 percent of your final grade and must be submitted to TurnItIn.com by the beginning of class on the date specified in the tentative schedule or the updated class schedule on the course webpage if applicable.

Students failing to submit their completed assignments on-time to TurnItIn.com will lose an automatic 5 points on their grades and an additional 5 points for each additional day that their paper are late including weekends and holidays. I will only grade papers which have been submitted to TurnItIn.com. If you fail to submit a paper to TurnItIn.com you will receive a zero grade on the final paper.

Class Participation

While class participation is not a dedicated portion of your final grade in this course, I do consider your active involvement in class discussions and activities when assigning final grades. Class participation requires that you carefully read and consider the assigned material before class, complete the ungraded and graded homework assignments for the assigned class date, ask questions in class or my office hours about material you don't understand, actively engage in class discussion, and volunteer to work through examples in class. Students who complete the assigned readings and homework will have a far better grasp of the material and be able to understand class lectures and discussions than those who fall behind on the reading or the homework. In some cases, you may need to read the assignment more than once, attempt the homework problems multiple times, consult with classmates or with me about particular homework problems, and work through additional problems on your own in order to fully understand the material.

Administrative Policies

Academic Honesty

All academic work must comply with the University's Code of Academic Integrity (see the student handbook <http://www.fiu.edu/student.htm> for a full discussion of the code and your obligations and rights as a student). Each student is responsible to inform themselves about the code before performing any academic work. Students who violate the code will fail the exam or assignment and be referred to the appropriate university office for disciplinary action. When a student submits any work to the instructor the student implicitly promises that the thoughts and expressions contained in the work are his or her own except when properly credited to another

person. Plagiarism is defined as representing someone else's words, ideas, or other expressions as one's own by either purposefully or unintentionally failing to give credit to the appropriate source. This means that failing to use appropriate citations and references can cause you to fail an assignment.

Late Homework Assignments

Homework assignments are due at the beginning of class on the date specified in the syllabus. Late assignments will not be accepted. If you anticipate any problem turning in an assignment by the assigned date please contact me and we can make special arrangements for you to turn your assignment in early or on-time via email as a last resort. Unless you have made prior arrangements with me, I will not accept emailed assignments.

Submitting Papers using TurnItIn.com

In the class, students are required to submit their papers electronically to TurnItIn.com. TurnItIn.com is an online database of current and archived internet material, all papers previously submitted to TurnItIn, and databases of journal articles and periodicals used for plagiarism detection. Once your paper has been submitted to TurnItIn.com it becomes part of the database that future papers are checked against. Turnitin.com also has other advantages. It records the time and date of papers submitted and it provides an archive of your submitted papers for the semester in the event that a paper is lost.

I will only grade the papers submitted to TurnItIn.com. Students who fail to submit papers to TurnItIn.com will receive a zero for their paper grade. TurnItIn.com allows you to check your submission so you can make sure that you submitted the correct version of the paper in an accessible, readable format. If you realize you have submitted an incomplete or incorrect version of the paper you may submit another version just email me and advise me that you are submitting a second, correct and complete version of your paper to TurnItIn.com.

In order to submit your paper to Turnitin.com you will need to create user profile. The student tutorial at http://www.turnitin.com/static/pdf/tii_student_qs.pdf contains detailed instructions for creating a user profile and uploading your paper. In order to create a user profile you need a specific class ID for this course, an enrollment password, and your own email address. The syllabus contains information about how to acquire a free FIU student email account if you do not already have one. The class ID for this class is **2546826**, and enrollment password for this class is **methods**. You must submit your paper to Turnitin.com as a Microsoft Word file, a Wordperfect file, a rich text file (rtf), or an Adobe Acrobat file (pdf).

Religious Observances

Students who are absent from class because of religious observances will not be penalized. However, students should make arrangements to turn-in assignments early or on-time via email. A student who desires to be excused from class to observe a religious holy day should notify me two weeks in advance.

Special Needs

FIU encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation in this course please contact the Disability Resource Center at (305) 348-3532 or locate them online at www.fiu.edu/~disser/ and see me as soon as possible. I will do my best to make arrangements for students with special needs.

Revised Tentative Class Schedule

I. Introduction

1/5 Measurement, description, and statistical inference

Reading: Agresti and Finlay, chapters 1-6

Achen, Chris. 2002. "Advice for Students Taking A First Political Science Graduate Course in Statistical Methods." *The Political Methodologist* 10: 10-12.
(available online at http://polmeth.wustl.edu/tpm/tpm_v10_n2.pdf then scroll down to page 10)

1/12 Comparing two variables: t-tests, measures of association, and regression

Reading: Agresti and Finlay, chapters 7-9

Breuning, Marijke. 1995. "Words and Deeds: Foreign Assistance Rhetoric and Policy Behavior in the Netherlands, Belgium, and the United Kingdom." *International Studies Quarterly* 39: 235-254.

1/19 *Martin Luther King Jr. Holiday: No Class*

II. Ordinary Least Squares: The Mechanics of Regression

1/26 Bivariate linear regression and multiple linear regression

Reading: Agresti and Finlay, chapters 10 and 11

Kennedy, chapters 1-4

Lewis-Beck, Michael S., and Tom W. Rice. 1983. "Localism in Presidential Elections: The Home State Advantage." *American Journal of Political Science* 27: 548-551.

Due: Graded Homework Assignment #1 (due in class by 2 p.m.)

2/2 The assumptions of the classical linear regression model

Reading: Kennedy, chapters 1-4

Berry, all

Due: Graded Homework Assignment #2 (due in class by 2 p.m.)

III. OLS in Practice: Using Multiple Regression Analysis

2/9 Model specification in multiple regression

Reading: Kennedy, chapters 5 and 6

Green, Donald Philip, and Jonathan S. Krasno. 1988. "Salvation for the Spendthrift Incumbent: Reestimating the Effects of Campaign Spending in House Elections." *American Journal of Political Science* 32: 884-907.

2/16 Multiple regression with interaction terms

Reading: Wright, Gerald C. 1976. "Linear Models for Evaluating Conditional Relationships." *American Journal of Political Science* 20: 349-373.

Thomas Brambor, William Roberts Clark, and Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14: 63-82. (Available electronically at: <http://homepages.nyu.edu/%7Emrg217/pa.pdf>)

Poggione, Sarah. 2004. "Exploring Gender Differences in State Legislators' Policy Preferences." *Political Research Quarterly* 57: 305-314.

Due: Graded Homework Assignment #3 (due in class by 2 p.m.)

VI. Violating the Assumptions of the CLRM

2/23 *Paper workshop: developing statistical models*

Due: Graded Homework Assignment #4 (due in class by 2 p.m.)

3/2 Multicollinearity

Reading: Kennedy, chapter 11 (p. 205-212)

Berry (review as needed)

Fiorina, Morris P. 1981. "Some Problems in Studying the Effects of Resource Allocation in Congressional Elections." *American Journal of Political Science* 25: 543-567.

3/9 Heteroscedasticity

Reading: Kennedy, chapter 8

Downs, George W. and David M. Rocke. 1979. "Interpreting Heteroscedasticity." *American Journal of Political Science* 23: 816-828.

Hwang, Sung-Don, and Virginia Gray. 1991. "External Limits and Internal Determinants of State Public Policy." *The Western Political Quarterly* 44: 277-298.

Due: Graded Homework Assignment #5 (due in class by 2 p.m.)

3/16 Serial correlation

Reading: Kennedy, chapter 9

Lewis-Beck, Michael S., and Tom W. Rice. 1985. "Government Growth in the United States." *The Journal of Politics* 47: 2-30.

3/23 *Spring Break: No Class*

3/30 Panel data

Reading: Yaffee, Robert A. 2003. "A Primer for Panel Data Analysis." *Connect: Information Technology at NYU*, Fall 2003 edition. (Available online: <http://www.nyu.edu/its/socsci/Docs/pda.pdf>)

Stimson, James A. 1985. "Regression in Space and Time: A Statistical Essay." *American Journal of Political Science* 29: 914-947.

Due: Graded Homework Assignment #6 (due in class by 2 p.m.)

4/6 *Paper workshop: presenting and discussing results*

V. Maximum Likelihood Estimation: Going Beyond Least Squares

4/13 Limited dependent variables

Reading: Agresti and Finlay, chapter 15

Kennedy, chapter 7

DeMaris, Alfred. 1995. "A Tutorial in Logistic Regression."
Journal of Marriage and the Family 57: 956-968.

4/20 *Paper Workshop: wrapping up a research paper*

Due: Graded Homework Assignment #7 (due in class by 2 p.m.)

4/24 Last day of finals week

Due: Final paper due by 5 p.m. via TurnItIn.com