

POLS 501  
DATA ANALYSIS II  
Spring, 2007

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Syllabus

Overview

The purpose of this course is to prepare the student for his or her exposure to statistical analysis as a professional political scientist. The intent of the course is to provide an understanding of the statistical tools generally available for describing empirical observations, and an understanding of “why,” “when,” and “how” each tool may be used. The instructional method of the course will be based primarily on student data analysis projects using STATA and SPSS. In other words, the students in this course will learn statistical analysis by doing statistical analysis on data they have collected. Since the analyses will be primarily conducted using computer software, the emphasis in this course will be on the proper choice of analysis to be done and the interpretation of the computer generated results. We will also review research papers from the current literature to examine examples of current professional statistical usage. Finally, each class member will have the opportunity to practice his or her teaching skills by presenting a textbook chapter to the rest of the class.

Textbooks

1. Gujarati, D. *Basic Econometrics, 4e.* McGraw-Hill.
2. Kohler, U. and Kreuter, F. *Data Analysis Using Stata.* Stata Press
3. Rabe-Hesketh, S. and Skrondal, A. *Multilevel and Longitudinal Modeling Using Stata.* Stata Press.
4. Norusis, M. *SPSS 13.0 Guide to Data Analysis.* Prentice Hall.
5. Kuhn, T. *The Structure of Scientific Revolutions.* Chicago

Data Collection and Analysis Assignments

Each student will collect, analyze, and report upon data proper to each of the statistical methodologies identified below. Computer laboratory time will be provided during class sessions as required (10 points each; total of 90)

- |    |                                |         |
|----|--------------------------------|---------|
| 1. | Comparison of Means            | Week 3  |
| 2. | Cross-tabulation               | Week 4  |
| 3. | ANOVA                          | Week 4  |
| 4. | Correlation/Regression         |         |
|    | a. Simple time series          | Week 5  |
|    | b. Bivariate analysis          | Week 6  |
|    | c. Advanced time series        | Week 8  |
| 5. | Multiple regression            | Week 10 |
| 6. | Logit/Probit analysis          | Week 12 |
| 7. | Simultaneous Equation analysis | Week 15 |

### Book Chapter Presentations

In pairs, each student will be responsible for presenting to the class three chapters from the Gujarati textbook (10 points each presentation):

Chapters 1 and 2	Week 3
Chapters 3 and 4	Week 4
Chapters 5 and 6	Week 5
Chapters 7 and 8	Week 6
Chapters 9 and 10	Week 7
Chapters 11 and 12	Week 8
Chapters 13 and 14	Week 9
Chapters 15 and 16	Week 10
Chapters 17 and 18	Week 12
Chapters 19 and 20	Week 13
Chapters 21 and 22	Week 14

### Article Reviews

Each student will present reviews of two articles to the class. The articles will be of the students choosing, but must be of an empirical nature. Each review should be brief (i.e., no longer than ten minutes). Presentations will start on Week Four and we will schedule two per week. (10 points for each presentation).