

POS 6933: Data Analysis in Public Affairs

Section #139B

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Office Hours: Wednesday 1:00 to 3:00 & by appointment

W 8-10: AND 0032 / PoliSci Computer Lab

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Course Description

This course is designed to introduce PA students to basic quantitative data analysis techniques that can be applied to public management and policy problems, program evaluation, and critical research questions. The course will emphasize application of proper pairing of analysis techniques to data types; application and interpretation of statistical analysis; use of data analysis in management decision-making; and implementation of data analysis using computer software.

Course Objectives

Upon successful completion of this course, students should be able to:

1. Propose questions for analysis that are pertinent to contemporary public policy and the broader study of public affairs.
2. Formulate a step-by-step approach for analyzing these research questions.
3. Identify the most appropriate methodological techniques for analyzing research questions and available data.
4. Conduct basic data analyses using the methodologies covered in the course.
5. Properly interpret the results of these analyses.

Course Materials

- Meier, Kenneth J., Jeffrey L. Brudney, and John Bohte. (2012). *Applied Statistics for Public & Nonprofit Administration*, 8th Edition. Belmont, CA: Wadsworth/Cengage Learning.
- Klass, Gary M. (2012). *Just Plain Data Analysis*. Lanham, MD: Rowman & Littlefield Publishers, Inc.
- **e-book:** *The Little SAS® Book for Enterprise Guide 4.2*. Susan J. Slaughter and Lora D. Delwiche. 2010. SAS® Institute, Inc. (Available free on-line from UF Smathers Library.)
- **e-book:** *Data Analysis Using SAS Enterprise Guide*. Lawrence S. Meyers, Glenn Gamst, AJ Guarino. 2009. Cambridge, NY: Cambridge University Press. (Available free on-line from UF Smathers Library.)
- **e-book:** *Basic Statistics Using SAS Enterprise Guide: A Primer*. Geoff Der & Brian S. Everitt. 2007. Cary, NC: SAS® Institute, Inc. (Available free on-line from UF Smathers Library.)
- Handouts and other written materials will be provided by the instructor and will be available in Sakai.
- A flash drive to store your work from the computer lab.

Course Requirements & Grading

- **Weekly Assignments:** You will be expected to complete a series of weekly homework assignments that test your knowledge of the skills learned in class. These projects, taken together, will account for 30% of your final grade.
- **Mid-term Exam:** This take-home exam will account for 15% of your final grade. The mid-term will be distributed at the end of class on February 27 and will be due at the start of class on **March 13**.
- **Final Exam:** This take-home exam will account for 15% of your final grade. The final exam will be distributed at the end of class on April 17 and will be due at the start of class on **April 24**.

POS 6933: Data Analysis in Public Affairs

- **Final Research Paper:** You will be expected to complete a research paper that uses the data analysis skills acquired during the semester. This project should address a policy or management issue of your choice, utilizing either primary or secondary data. The final research paper accounts for 40% of your final grade, including a preliminary paper proposal and an in-class presentation of your work.

Readings & Attendance

You are responsible for completing all assigned readings before class, as this will facilitate your understanding of lectures, participation in discussion, and may be essential to taking part in data lab instruction. Class attendance is extremely important, and it is essential that you keep up with weekly homework assignments and readings. This is not a typical seminar – each week’s material builds on the previous week, and each week’s class time will include lecture, discussion, and work in the computer lab. In addition, you’ll need to spend time honing your skills with computer software for data analysis.

Research Paper

This project provides students with an opportunity to go through the research process from start to finish, applying the analysis techniques learned in class to a substantive policy or management problem. You’ll begin with a research question, formulate hypotheses, find or gather data, conduct statistical analyses, present and interpret the results, and provide policy/management recommendations based on your findings.

In completing the research paper, students will:

- Identify a significant research question related to a policy or management issue
- Choose an appropriate dataset which includes needed variables (or collect primary data relevant to the issue, for all required variables)
- Conduct appropriate analyses based on the data and variables chosen to properly address the research question using techniques from the course
- The final paper should include a literature review, description of methodology and variables, statistical analysis, interpreted results, and conclusions with policy/management recommendations based on the findings
- To insure that you remain on track, a paper proposal including your research question, proposed dependent and independent variables, and dataset choice is due by **March 13**. However, I’d recommend you begin this process as soon as possible for the best possible outcome.

SAS®

This course will use SAS Enterprise Guide V5.1 for data analysis, which will be available on all computers in the Political Science computer lab (Anderson 001). To use SAS at home, you may purchase the software from the HUB for \$35 for install on your personal computer (this is a one-time fee that allows use of SAS for the entirety of your enrollment as a UF student).

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Course Outline

Date	Topic	Readings	Due
1/9/13	Course overview, Intro to SAS, Intro to Research Design		
1/16/13	Measurement & Research Design	Meier Chapters 1-3, Class Chapter 3	
1/23/13	Analysis Software, Finding Data	Slaughter Chapters 1-2, Tutorial A	
1/30/13	Descriptive Statistics – Frequencies	Meier Chapter 4 Slaughter Chapter 7.5	Assignment #1
2/06/13	Descriptive Statistics – Central Tendency, Dispersion	Meier Chapters 5-6 Slaughter Chapter 7.7, 9.1, 9.2	Assignment #2
2/13/13	Inferential Statistics	Meier Chapter 11	Assignment #3
2/20/13	Hypothesis Testing, Estimating Population Proportions	Meier Chapters 12-13	Assignment #4
2/27/13	Testing Differences Between Groups – Difference of Means, t-tests	Meier Chapter 14	Assignment #5
	Mid-term Exam Distributed at end of Class		
3/06/13	<i>Spring Break – No Class</i>		
3/13/13	Presenting Differences Between Groups – Social Indicators, Census Data	Klass Chapters 1, 6	Mid-term Due Paper Proposal Due
3/20/13	Presenting Differences Between Groups – Using Tables, Graphs		Assignment #6
3/27/13	Contingency Tables	Meier Chapters 15-16 Slaughter Section 9.3	Assignment #7
4/03/13	Contingency Tables, Controlling for a 3 rd Variable	Meier Chapters 16-17	Assignment #8
4/10/13	Bivariate Regression (Correlations)	Meier Chapters 18-19, Chapter 23 pages 444-448 Slaughter Section 9.4	Assignment #9
4/17/13	Multiple Regression (OLS)	Meier Chapters 21, 23 Slaughter Section 9.5	Assignment #10
	Final Exam Distributed at end of Class		
4/24/13	Final Paper Presentations		Final Exam Due
4/29/13	Final Research Papers Due		

* This schedule is subject to change with proper advance notice to students