POLS 208: Political Science Methods

Emory University
Spring 2012

Meeting room:	Math & Science Center E208
Meeting time:	Tuesday and Thursday, 2:30–3:45pm
Review session:	Tarbutton Hall 116
Meeting time:	Tues/Weds/Thurs, 4:00/5:00/6:00pm

Instructor:	Drew Linzer	TAs:	Jana Marie Hutchinson (Tu)
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Office:	Tarbutton Hall 102		Laura Maxwell (Th)
Office hours:	Thursday, 9:00am–12:00pm		

Course Description and Objectives

This course is designed to introduce students to the style of analytic thinking required for research in the social sciences; the concepts and procedures used in the conduct of empirical political science research; and the use of computers for analysis of quantitative social science data. In short, this course teaches a set of skills that are essential for both understanding the research you will encounter in later political science classes, and being able to produce high-quality original research of your own. Beyond simply learning how to be a more critical participant in public affairs, by the end of the semester, you will also be better-prepared for career opportunities using statistical tools and the products thereof.

We will cover the principles of the scientific method as applied to the study of politics, emphasizing an approach to understanding politics that uses generalizing theory and testable hypotheses. The first part of the course addresses critical issues in the design of empirical tests of theories about political phenomena, including sample selection, concept definition and measurement, and types of data collection. The remainder of the course focuses on a variety of techniques for analyzing quantitative political data, from simple descriptive statistics and graphs, to tabular data analysis, tests of bivariate association, multiple linear regression models, and models for explaining dichotomous outcome variables.

This is an applied course that draws on dozens of real political applications and research examples when introducing each concept and technique. The course strongly favors practice (e.g., choice of appropriate statistical procedure, diagnostics, interpretation) over theory (mathematical derivations and proofs). You do not need any more math background than high school algebra for this course, and you will not be expected or required to memorize any mathematical formulas. Instead, you will learn real, practical skills in using statistical software, identifying which approaches to take for different kinds of problems, and interpreting the sometimes conflicting and confusing results reported in both academic journals and in the popular press.

POLS 208 is mandatory for majors in Political Science or International Studies at Emory University. The department strongly encourages all students to take this course during their first two years to prepare themselves for upper-level coursework.

Required Texts

Please purchase both of the following texts, which are available in the Emory bookstore.

> Paul M. Kellstedt and Guy D. Whitten, *The Fundamentals of Political Science Research* (Cambridge University Press, 2009).
>
> Alan Agresti and Barbara Finlay, *Statistical Methods for the Social Sciences, Fourth Edition* (Prentice Hall, 2008).

All other readings on the syllabus are available through the the Emory Libraries Reserves Direct system, http://ereserves.library.emory.edu.

Computer Software

Quantitative social science research requires the use of computers. We will be using a software package called R, which is free to download at http://www.r-project.org and is already installed on many Emory computers. R is an extremely powerful data analysis "environment" that is becoming increasingly popular in academic research and private industry. Once you know how to use this software program, it should prove very useful to you in future courses at Emory (and beyond). To assist you in using R, we will be taking advantage of a user-friendly add-on called R Commander. Instructions for how to download and install R and R Commander on your personal computer will be handed out separately.

Review Sessions

At the time of enrollment, every student registered for a weekly one-hour review session. These sessions are offered in addition to the regular lecture classes, and will be led by one of the three teaching assistants. Attendance at the review sessions is *optional* but *highly recommended*. This is your opportunity to get extra assistance from your TA on questions surrounding the lecture material, course assignments, computer software, exams, or any other area of concern.

Grading and Evaluation

Grades in the course will be based on the following items:

1. Six data analysis essays: 60%
2. Midterm Exam: in-class, on Thursday March 8: 20%
3. Final Exam: Monday May 7, 4:30-7:00pm: 20%

The data analysis essays are short, 750-word written assignments that are designed to give you practice doing actual social scientific research, and communicating your findings in a clear and concise manner. The essay topics will be handed out in class on the days noted on the syllabus. Essays will be due to your TA at the beginning of class the following week. Assignments must be printed out and handed in in person.

Grading scale. The grading scale will be as follows:

100-93%:	A	82.9-80%:	B-	69.9-67%:	D+
92.9-90%:	A-	79.9-77%:	C+	66.9-60%:	D
89.9-87%:	B+	76.9-73%:	C	<59.9%:	F
86.9-83%:	B	72.9-70%:	C-		

Attendance and class preparation. Attendance is mandatory in this class. This includes coming to class on time. The exams will cover both what is included in the readings and what is taught in lecture. Since not everything I discuss in class will be in the course reading material, you will be at a significant disadvantage if you miss class. You are also responsible for consulting the syllabus and reading all of the assigned chapters and articles prior to each class. Doing so will considerably increase the value to you of the class meetings.

Laptop policy. The use of laptop computers during lecture meetings is not allowed. However, you should certainly bring your laptop to review sessions if you need help from your TA.

Missed exams. Missed exams may be re-taken under the following circumstances only:

1. Death in the immediate family (parent, spouse, sibling) within two weeks before the exam.
2. Participation in an official Emory-sponsored academic or sporting event.
3. Unforeseeable medical emergency affecting yourself, your spouse, or your child (something beyond feeling under the weather—car accident, major sickness, or the like).

In the case of reasons (1) or (2), you must give me at least 24 hours advance notice (such as an email or phone call) that you will miss the exam or it may not be made up. I may require supporting documentation. Conflicts with a work schedule and leaving for a non-academic trip or vacation are not an excuse to miss an exam or any other assignment in this class; I suggest that you consult the course schedule in advance and drop the course if you cannot be present for the classes and assignments.

Late work. All work is late if submitted after the date and time specified as the due date. Data essays handed in late will result in a penalty of 20 percentage points per day (from 90% to 70%, and so on). Essays handed in more than three calendar days late will receive a grade of zero. To ensure fairness, this policy will be strictly enforced. Exceptions under the conditions above may be made, but will require at least 24 hours advance permission from the instructor.

Academic misconduct. Students are expected to follow the Emory College Honor Code at all times, particularly with respect to issues of honesty and attribution; for more information, please consult http://www.college.emory.edu/current/standards/honor_code.html. Any suspected academic misconduct—including possible instances of plagiarism—will be handled exactly according to the procedures outlined in the Honor Code.

Office Hours and Email Policy

The large size of this class makes it necessary for me to maintain a very strict policy with respect to email. If you have questions about the class that are of a procedural nature—for example, regarding attendance, late assignments, due dates, or class schedules—you may email

me and expect a response within one working day. Unfortunately, however, I can not answer any questions over email that are of a substantive nature concerning the class material, assignments, or exams. If you send me an email that I consider to fit this description, I will respond with a polite request for you to schedule a time to meet with me during my office hours.

Appointments for office hours can be made on the class Blackboard site. You are also welcome to schedule a meeting in small groups with your classmates. All appointments will be made on a first-come, first-served basis.

Peer Tutoring

For additional help outside of class, I strongly encourage you to make use of Emory's Peer Tutoring program, EPASS. More information about this program, as well as instructions on how to schedule an appointment, may be found at college.emory.edu/home/academic/learning/tutoring. EPASS tutors are limited, so it is best to plan ahead, especially closer to the end of the semester.

Class Schedule

January 19 (Th): First meeting. Introduction/syllabus review.

January 24 (Tu): What is science? Is social science really science?

Kellstedt and Whitten, Chapter 1.

Agresti and Finlay, Chapter 1.

Andrew Ehrenberg, "Even the Social Sciences Have Laws," *Nature* 365 (September 30, 1993): 385.

Steve Lohr, "For Today's Graduate, Just One Word: Statistics," *New York Times* (August 6, 2009): A1.

January 26 (Th): Research questions, theories, concepts, and hypotheses.

Kellstedt and Whitten, Chapter 2.

Charles A. Lave and James G. March, *An Introduction to Models in the Social Sciences* (New York: Harper & Row, 1975), Pages 9-42.

January 31 (Tu): Research design I: the logic of experimentation and causal inference.

Kellstedt and Whitten, Chapter 3 and 4.1–4.2.

Joel Turner, "The Messenger Overwhelming the Message: Ideological Cues and Perceptions of Bias in Television News," *Political Behavior* 29 (December 2007): 441-464.

Alan S. Gerber and Donald P. Green, "Do Phone Calls Increase Voter Turnout? A Field Experiment," *The Public Opinion Quarterly* 65 (Spring 2001): 75-85.

February 2 (Th): Research design II: non-experimental large-N designs.

Kellstedt and Whitten, Chapter 4.3–4.4.

James Fowler, "The Colbert Bump in Campaign Donations: More Truthful than Truthy," *PS: Political Science and Politics* 41 (July 2008): 533-539.

February 7 (Tu): Research design III: small-N designs, case selection and inference.

Ashutosh Varshney, "Ethnic Conflict and Civil Society: India and Beyond," *World Politics* 53 (April 2001): 362-398, esp. 370-374.

Barbara Geddes, "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics," *Political Analysis* 2 (1991): 131-150.

February 9 (Th): Measurement: levels of measurement, reliability, and validity.

▷ **Essay #1 distributed.**

Kellstedt and Whitten, Chapter 5.

Agresti and Finlay, Chapter 2.1.

Joel Best, *Damned Lies and Statistics* (Berkeley: University of California Press, 2001), Pages 30-61.

Alan Agresti and Brett Presnell, "Misvotes, Undervotes and Overvotes: The 2000 Presidential Election in Florida," *Statistical Science* 17 (November 2002): 436-440.

February 14 (Tu): Data collection, survey design, and sampling.

Agresti and Finlay, Chapter 2.2–2.5.

Richard F. Fenno, Jr., "Observation, Context, and Sequence in the Study of Politics," *American Political Science Review* 80 (March 1986): 3-15.

Janet Buttolph Johnson and H. T. Reynolds, *Political Science Research Methods, 6th ed.* (Washington, DC: CQ Press, 2007), Chapters 8 and 9.

Jarol B. Manheim, Richard C. Rich, and Lars Willnat, *Empirical Political Analysis: Research Methods in Political Science, 5th ed.* (New York: Longman, 2002), Chapters 6 and 7.

February 16 (Th): Descriptive statistics and visualizing data I.

▷ **Essay #1 due.**

▷ **Essay #2 distributed.**

Kellstedt and Whitten, Chapter 6.

Agresti and Finlay, Chapter 3.1–3.4.

Douglas R. Hofstadter. "On Number Numbness." In *Metamagical Themas* (New York: Basic Books, 1985), Pages 115-135.

February 21 (Tu): Descriptive statistics and visualizing data II.

Kellstedt and Whitten, Chapter 6. (Re-read)

Agresti and Finlay, Chapter 3.7.

February 23 (Th): Probability distributions.

▷ **Essay #2 due.**

Agresti and Finlay, Chapter 4.1–4.3.

February 28 (Tu): Sampling distributions.

▷ **Essay #3 distributed.**

Kellstedt and Whitten, Chapter 7.

Agresti and Finlay, Chapter 4.4–4.7.

March 1 (Th): Confidence intervals and statistical inference.

Kellstedt and Whitten, Chapter 8.1–8.3.

Agresti and Finlay, Chapter 5.

Jeffrey J. Mondak, "Newspapers and Political Awareness," *American Journal of Political Science* 39 (May 1995): 513-527.

March 6 (Tu): Statistical significance and hypothesis testing.

▷ **Essay #3 due.**

Agresti and Finlay, Chapter 6.

March 8 (Th): Midterm exam.

March 13 (Tu): No class; Spring break.

March 15 (Th): No class; Spring break.

March 20 (Tu): Categorical variables: frequency distributions and cross tabulation.

▷ **Essay #4 distributed.**

Agresti and Finlay, Chapter 8.1.

Pew Research Center for the People & the Press. "Inside Obama's Sweeping Victory" (November 5, 2008).

March 22 (Th): The chi-square test of independence.

Kellstedt and Whitten, Chapter 8.4.1.

Agresti and Finlay, Chapter 8.2.

March 27 (Tu): Bivariate scatterplots and correlation.

▷ **Essay #4 due.**

Kellstedt and Whitten, Chapter 8.4.3.

Agresti and Finlay, Chapter 3.5 and 9.4.

Thomas M. Holbrook, "Incumbency, National Conditions, and the 2008 Presidential Election," *PS: Political Science & Politics* 41 (October 2008): 709-712.

March 29 (Th): Linear modeling: ordinary least squares.

▷ **Essay #5 distributed.**

Kellstedt and Whitten, Chapter 9.1–9.3.

Agresti and Finlay, Chapter 9.1–9.2.

April 3 (Tu): The linear regression model: fit and diagnostics.

Kellstedt and Whitten, Chapter 9.4–9.5 and 11.5.

Agresti and Finlay, Chapter 9.3–9.7.

April 5 (Th): The multiple linear regression model I: theory.

▷ **Essay #5 due.**

Kellstedt and Whitten, Chapter 10.1–10.4.

Agresti and Finlay, Chapter 10 and 11.1.

April 10 (Tu): The multiple linear regression model II: application.

Alan Abramowitz, "Forecasting the 2008 Presidential Election with the Time-for-Change Model," *PS: Political Science and Politics* 41 (October 2008): 691-695.

April 12 (Th): Interpreting and communicating regression estimates.

▷ **Essay #6 distributed.**

Kellstedt and Whitten, Chapter 10.5–10.8.

Agresti and Finlay, Chapter 11.2–11.3.

G. Bingham Powell, Jr. "American Voter Turnout in Comparative Perspective," *American Political Science Review* 80 (March 1986): 17-43.

April 17 (Tu): Regression modeling using categorical IVs.

Kellstedt and Whitten, Chapter 11.1–11.3.

Agresti and Finlay, Chapter 13.2–13.3.

Robert W. Jackman. "Political Institutions and Voter Turnout in the Industrial Democracies," *American Political Science Review* 81 (June 1987): 405-423.

April 19 (Th): When a relationship is non-linear: variable transformations.

▷ **Essay #6 due.**

Kellstedt and Whitten, Chapter 11.6.

Agresti and Finlay, Chapter 11.9 and 14.5–14.6.

April 24 (Tu): Dichotomous dependent variable models I: logit and probit.

Kellstedt and Whitten, Chapter 11.4.

Agresti and Finlay, Chapter 15.1–15.2.

D. Sunshine Hillygus and Todd G. Shields, "Moral Issues and Voter Decision Making in the 2004 Presidential Election," *PS: Political Science and Politics* 38 (April 2005): 201-209.

April 26 (Th): Dichotomous dependent variable models II: interpretation.

Kellstedt and Whitten, Chapter 11.4. (Re-read)

Agresti and Finlay, Chapter 15.1–15.2. (Re-read)

May 1 (Tu): Review of regression modeling.

Agresti and Finlay, Chapter 1.

Edward R. Tufte, "Improving Data Analysis in Political Science," *World Politics* 21 (July 1969): 641-654.

May 7 (M): Final Exam, 4:30-7:00pm.