

PSC 200: Applied Data Analysis

Fall 2007

Lecture: 12:30-1:45, Monday and Wednesday, Bausch and Lomb 109

Labs / Recitation: 11:00-11:50 and 1:00-1:50, Gavett 244

Course website: <http://mail.rochester.edu/~mperess/ada2007.html>

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Overview: This course offers an introduction to empirical research methods in political science. By the end of the semester, students should have a better acquaintance with the type of empirical work done by most political scientists (and other social scientists) and the ability to understand and critique it.

Textbook: The textbook for the course is Agresti and Finlay, “Statistical Methods for the Social Sciences”.

Readings: Readings will be occasionally assigned (about one per week). I will mention assigned readings in class and post the readings on the course website. We will discuss these in class and some will appear on the homework assignments and exams.

- Gelman, Andrew, and Gary King (1993). “Why Are American Presidential Election Campaigns Polls so Variable When Votes Are So Predictable?”. *British Journal of Political Science* 4:409-451. Read pages 409-433.

- Grofman, Bernard, William Koetzle, and Anthony J. McGann (2002). "Congressional Leaders 1965-96: A New Look at the Extremism Versus Centrality Debate." *Legislative Studies Quarterly* 27:87-105.
- Wilcox, Clyde (1987). "The Timing of Strategic Decisions: Candidacy Decisions in 1982 and 1984". *Legislative Studies Quarterly* 12:565-572.
- Green, Donald P., and Alan S. Gerber (2004). "Get Out the Vote!: How to Increase Voter Turnout". Appendix A.
- Jacobson, Gary C. "The Marginals Never Vanished: Incumbency and Competition in Elections to the U.S. House of Representatives, 1952-82". *American Journal of Political Science* 31:126-141.
- Bishop, George F., Robert W. Oldendick, and Alfred J. Tuchfarber (1982). "Political Information Processing: Question Order and Context Effects". *Political Behavior* 4:177-200.
- Bishop, George F. (1987). "Experiments with the Middle Response Alternative in Survey Question". *Public Opinion Quarterly* 51:220-232.
- Mystery Pollster Frequently Asked Questions on Likely Voters:
http://www.mysterypollster.com/main/2004/09/how_do_pollster_1.html
- Erikson, Robert S., Costas Panagopoulos, and Christopher Wlezien (2004). "Likely (and Unlikely) Voters and the Assessment of Campaign Dynamics" *Public Opinion Quarterly* 4:588-601.
- Malhotra, Neil, and Jon A. Krosnick (2007). "The Effect of Survey Model and Sampling on Inferences about Political Attitudes and Behavior: Comparing the 2000 and 2004 ANES to Internet Surveys with Nonprobability Samples". *Political Analysis* 15:286-323.

Software: We will be using SPSS in this class. You may use SPSS in the computer lab, or purchase a student copy for ~\$40.

Recitations: The teaching assistant will hold weekly recitations in computer labs to reinforce concepts from the class, assist with software questions, review homework, and provide general guidance.

Homeworks: Six homework assignments will be required. You will have at least a week to complete each assignment. Most of these homework assignments will require you to use SPSS. Homeworks must be handed to me in class or the TAs in recitation (depending on the due date).

Grading: Grades will be based on two exams and six homework assignments. Each exam and the homework's assignments will count for one-third of your grade. The second exam will not be cumulative.

Syllabus: This syllabus may be altered during the semester to accommodate the learning pace of the class. It is the students' responsibility to keep abreast of assignments and due dates by attending class and monitoring the class website. Homework assignments, lecture notes, reading material, etc., will be posted online.

I – Descriptive Statistics (about 2 lectures)

I.1 – Introduction and Overview

- Textbook: Sections 1.1-1.4

I.2 – Descriptive Statistics

- Textbook: Sections 2.1-2.5, 3.1-3.6

II – Probability (about 2 lectures)

II.1 – Discrete Probability Distributions

- Textbook: Section 4.1

II.2 – Continuous Random Variables

- Textbook: Section 4.2

III – Statistics (about 12 lectures)

III.1 – Intro to Statistics

- Textbook: Section 5.1

III.2 – Sampling Distributions

- Textbook: Sections 4.3-4.6

III.3 – Inference for Means

- Textbook: Sections 5.2, 6.1-6.2, 6.5

III.4 – Inference for Proportions

- Textbook: Sections 5.3, 6.3, 6.6

III.5 – Inference for Differences in Proportions

- Textbook: Sections 7.2

III.6 – Inference for Differences in Means

- Textbook: Sections 7.1, 7.3, 7.4

III.7 – Sample Size Determination and Power

- Textbook: Sections 5.4, 6.4, 6.7

III.8 – Surveys

- American Public Opinion: Chapter 2

IV – Regression (about 10 lectures)

IV.1 – Correlation and Bivariate Regression

- Textbook: Sections: 9.1-9.4

IV.2 – Multivariate Regression: Estimation

- Textbook: Sections: 11.1–11.3

IV.3 – Multivariate Regression: Hypothesis Testing

- Textbook: Sections: 9.5, 11.4

IV.4 – Indicator Variables and Analysis of Variance

- Textbook: Sections: 12.1-12.3

IV.5 – Functional Form and Interactions

- Textbook: Sections: 11.5, 12.4-12.5

IV.6 – Model Building, Diagnostics, and Corrective Measures

- Textbook: Sections: 14.2-14.4

IV.7 – Discrete Dependent Variables

- Textbook: Sections: 15.1-15.3