

POLITICAL SCIENCE 585: TECHNIQUES OF POLITICAL ANALYSIS
Fall 2005

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Class Meetings: Tuesday and Thursday, 7:30 to 9:18 a.m., Derby Hall, room 0125

Office Hours: Tuesday and Thursday, 9:30 to 10:30 plus lab hours to be announced

Text: Gonick, L. and Smith, W. (1993). *The Cartoon Guide to Statistics*. Available at SBX (cost approximately \$13)

PURPOSE OF THE COURSE: This course is designed to introduce students to tools and methods of quantitative analysis in the social sciences. The course will be of particular benefit to anyone who intends to pursue graduate studies in the social sciences, law, medicine, business, or most academic fields. It should help all students to become more critical users of news and other research involving statistics.

This course may be used to satisfy the GEC requirement for quantitative and logical skills. As such, it reflects the following.

Goals/Rationale: Courses in quantitative and logical skills develop logical reasoning, including the ability to identify valid arguments, use mathematical models, and draw conclusions based on quantitative data.

Learning Objectives: Data Analysis. Students understand statistics and probability, comprehend mathematical methods needed to analyze statistical arguments, and recognize the importance of statistical ideas.

GRADING: You may choose from two grading options, as follows.

Plan A: If you choose this option, your grade will be based on eight 10-point homework assignments and one 20-point research design, for a total of 100 points. Note that there are actually *nine* homework assignments on the schedule; I will drop your lowest homework score when calculating your final grade. Additionally, to encourage you to attend class and to keep up with the assigned readings, I will offer occasional unannounced quizzes or in-class assignments worth a total of approximately 10 points of extra credit throughout the course of the quarter.

Plan B: If you choose this option, your grade will be based solely on a comprehensive closed-note final exam to be administered during finals week. The exam is worth 100 points and will likely include a combination of math/statistics problems and essay questions.

I follow standard guidelines for assigning grades, such that 93 to 100 is an A, 90 to 92.9 is an A-, 87 to 89.9 is a B+, 83 to 86.9 is a B, etc. I may adjust final scores by 1/3 of a letter grade, however, to reflect particularly strong or poor class participation.

ATTENDANCE: Often, a grading key will be distributed immediately after homework assignments are collected in class. For this reason, **NO LATE HOMEWORK ASSIGNMENTS WILL BE ACCEPTED FOR ANY REASON.** If you are unable to attend class on a day when an assignment is due, you are welcome to leave your assignment in my mailbox or to send it via email **PRIOR TO THE BEGINNING OF CLASS.** There is no opportunity to make up missed quizzes or in-class assignments; these points are extra-credit and, in part, a reward for regular class attendance. If you must be absent, it is your responsibility to check your email and to contact me for any announcements, homework assignments, or handouts that you have missed.

COMPUTER RESOURCES: Several of the homework assignments will require data analysis using either Microsoft Excel or SPSS. Both of these programs are available in the Political Science computer lab as well as most other campus labs. For a current lab schedule, go to:

<http://sccweb.it.ohio-state.edu/public/hours/>

If you are interested in having a copy of SPSS for your own computer, you can download one free as an OSU student. For more information, go to:

http://www.oit.ohio-state.edu/site_license/

HONESTY: I will assume that all work submitted for this class is your own. Cases of suspected dishonesty will be referred to the university's committee on academic misconduct and handled in accordance with university rules and procedures.

DISABILITY: If you have any sort of physically, mentally, or emotionally disabling condition that affects your ability to participate in this course, it is your responsibility to bring this to my attention as soon as possible. The university offers a variety of options for students with disabilities, and I will do all I can to ensure that you are able to gain full benefit from the course and are graded appropriately.

SCHEDULE: The following is a tentative schedule of lecture topics and textbook readings. Homework assignments and supplemental required readings will typically be distributed in class and/or via email each Tuesday. If you miss class, it is your responsibility to check email so that you will be prepared for the following class session.

Thursday, September 22	Course Introduction
Tuesday, September 27	Data and Research Design
Thursday, September 29	Epistemology Read Popper, K. (1959). <i>The Logic of Scientific Discovery</i> (excerpt to be distributed in class). Read Kuhn, T. (1962). <i>The Structure of Scientific Revolutions</i> (excerpt to be distributed in class).
Tuesday, October 4	Math and Notation Review, Microsoft Excel Tutorial Homework 1 due (10 points)

Thursday, October 6	Measures of Central Tendency and Variability Read Chapter 2
Tuesday, October 11	Probability Read Chapter 3 Homework 2 due (10 points)
Thursday, October 13	Probability
Tuesday, October 18	Random Variables Read Chapter 4 Homework 3 due (10 points)
Thursday, October 20	Normal Distributions Read chapter 5
Tuesday, October 25	Sampling Read Chapter 6 Homework 4 due (10 points)
Thursday, October 27	Confidence Intervals Read Chapter 7
Tuesday, November 1	Hypothesis Testing Read chapter 8 Homework 5 due (10 points)
Thursday, November 3	Comparing Populations Read chapter 9
Tuesday, November 8	Correlation Read chapter 11 Homework 6 due (10 points)
Thursday, November 10	Bivariate Regression
Tuesday, November 15	Multiple Regression Homework 7 due (10 points)
Thursday, November 17	Multiple Regression
Tuesday, November 22	Multiple Regression Homework 8 due (10 points)
Thursday, November 24	THANKSGIVING BREAK/NO CLASS
Tuesday, November 29	Multiple Regression Homework 9 due (10 points)
Thursday, December 2	Class Wrap-Up Course Evaluations Research design due (20 points)
Monday, December 5	Final Exam (for Plan B students only) 9:30 to 11:18 a.m., Derby 0125