

POLS 300: Methods in Political Science: Spring 2007

MWF 1:10–2:25 p.m., room TBD

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Office: 109 Fitzgerald Hall—(314) 977-3006

Hours: MW 2:30–4:00 p.m., or by appointment.

The purpose of this course is to train students in how to analyze political phenomena in a rigorous and scientific manner. This knowledge requires an understanding of two different components: research design and statistics.

In the first component, students will learn how to discriminate between theories, pose proper research questions, construct a relevant hypothesis, make valid causal inferences, operationalize concepts, and test their hypotheses. The latter component offers the student a “statistical toolbox” to use as he or she pursues the scientific study of all things political. This component covers quantitative topics such as central tendency and dispersion, measures of association, and regression analysis, using both manual computation and computer software.

Above all else, it is my hope that this course will whet your appetite for the study of politics as a *science*, and thus prepare you to better understand the content of future classes in the social sciences and perform your own inquiries into political and social phenomena.

Textbooks:

- Philip H. Pollock III. 2005. *The Essentials of Political Analysis*, 2nd ed. Washington: CQ Press. ISBN 1-56802-997-7. **(required)**
- Philip H. Pollock III. 2005. *An SPSS Companion to Political Analysis*, 2nd ed. Washington: CQ Press. ISBN 1-56802-996-9. **(required)**
- Jane E. Miller. 2005. *The Chicago Guide to Writing about Multivariate Analysis*. Chicago: U of Chicago Press. ISBN 0-226-52783-2. **(required)**

You will also need a scientific, financial, or statistical calculator if you do not already have one—it will need to be capable of calculating square roots and e^x aka $\exp(x)$.

Assignments and Grading: Your grade in this course will be based on the following elements:

Literature Review	10%
Research Paper	15%
Midterm Exam	30%
Final Exam	30%
Homework and Lab Exercises	10%
Attendance and Participation	5%

The following grades will be awarded in this course:

Final Average	≥ 93.0	≥ 90.0	≥ 87.0	≥ 83.0	≥ 80.0	≥ 77.0	≥ 73.0	≥ 70.0	≥ 60.0	< 60.0
Grade	A	A–	B+	B	B–	C+	C	C–	D	F
Grade Points	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.0	0.0

Exams: The exams will be open-book, in-class examinations, consisting of short-answer questions and statistical problems.

On the quantitative portions of both exams, you will be expected to show all your work. If you do not show sufficient work to indicate how you arrived at your answer, you will not receive any credit for that question, even if your answer is mathematically “correct.”

Research Paper: The research paper will be approximately 15–20 pages in length (typewritten, double-spaced, with one-inch margins, page numbers, and a font in a similar size to this one; the page count does not include a required title page) in which you will conduct an empirical, quantitative research project in political science, broadly defined. You may make use of the data we collect as part of the class project, or you may use an established data source such as the [American National Election Study](#) series, the General Social Survey, or any of the other studies available via [ICPSR](#).

After selecting an appropriate topic, in your paper you must:

1. explain the relevance of the topic;
2. conduct a literature review critiquing *at least ten* items of previous literature on (or directly related to) the topic, the majority of which must have appeared in academic journals or scholarly books;
3. propose a hypothesis (or hypotheses) and explain how this hypothesis (or these hypotheses) will be tested;
4. obtain data to test these hypotheses;
5. analyze this data to test these hypotheses, applying appropriate statistical tests; and
6. discuss the conclusions of this research.

Your paper must be an individual effort; you may consult with me, the Writing Center, other faculty members, or other students, but the writing, research and data analysis must be substantially your own work.

A literature review paper (meeting goals 1–3) will be due on the date designated on the syllabus. The final paper (meeting all of the above goals, and incorporating the literature review) will be due on the last day of the class.

The paper must consistently utilize the citation style of the [American Political Science Association](#), include appropriate figures and tables and a full bibliography listing the works cited in your paper, and be written using coherent prose and acceptable grammar. Please refer to *The Style Manual for Political Science* published by the APSA for a complete guide to the proper use of APSA style.

The final paper is expected to be of a standard that could be presented at a state or regional political science conference, such as the Illinois Conference for Students of Political Science in April 2008. More information on this conference will be provided at a later date.

Homework and Lab Assignments: The statistical portion of the class will include regularly-scheduled homework assignments, designed to improve your understanding of the material presented in the lecture. The assignments will generally be due at the beginning of the following class period. Any variations in this schedule will be announced when the assignment is given.

Homework assignments, unlike the exams, will primarily be graded on the basis of whether or not a reasonable effort was made to correctly answer the problems (correctness is a secondary consideration). It is in your best interest—both in terms of your grade on the homework, and your performance on the exams—to complete these assignments to the best of your ability.

Policies: Attendance at class (including the lab sessions) is required. Please discuss any planned absences with me at least two weeks in advance. Absences, tardiness, cell phone disruptions and abuse of Internet technologies (e.g., web browsing/IMing during class) will adversely affect your grade in the course.

Please arrive at class *on time* and mute (or switch off) all pagers, cell phones, and alarms during class.

Students are expected to demonstrate basic proficiency in communicating using the English language, as defined by Strunk and White's *The Elements of Style* and other references. Poorly-written assignments and responses to essay questions may receive reduced credit.

Late assignments will lose 5 percentage points per calendar day they are late.

This syllabus is subject to revision by the professor.

Finally, you are *strongly encouraged* to make use of my office hours if you have any questions or concerns relating to this class. Unlike most other courses in political science, the knowledge in this course is largely cumulative—understanding what we have already covered is key to understanding new material. If you feel like you are falling behind, it is in your best interest to *see me* as soon as possible to get back on track.

Academic Integrity and Honesty: The University is a community of learning, whose effectiveness requires an environment of mutual trust and integrity. Academic integrity is violated by any dishonesty such as soliciting, receiving, or providing any unauthorized assistance in the completion of work submitted toward academic credit. While not all forms of academic dishonesty can be listed here, examples include copying from another student, copying from a book or class notes during a closed book exam, submitting materials authored by or revised by another person as the submitter's own work, copying a passage or text directly from a published source without appropriately citing or recognizing that source, taking a test or doing an assignment or other academic work for another student, securing or supplying in advance a copy of an examination without the knowledge or consent of the instructor, and colluding with another student or students to engage in academic dishonesty.

Any clear violation of academic integrity will be met with appropriate sanctions. Possible sanctions for violation of academic integrity may include, but are not limited to, assignment of a failing grade in a course, disciplinary probation, suspension, and dismissal from the University. Students should review the College of Arts and Sciences policy on Academic Honesty, which can be accessed on-line at <http://www.slu.edu/colleges/AS/> under "Quicklinks for Students" or in hard copy form in the Arts and Sciences Policy Binder in each departmental or College office.

Students with Special Needs: Any student who believes that he or she may need academic accommodations in order to meet the requirements of this course—as outlined in the syllabus—due to presence of a disability, should contact the Office of Diversity and Affirmative Action. Please telephone the office at 314-977-8885, or visit DuBourg Hall Room 36. Confidentiality will be observed in all inquiries.

Lab Sessions: There are seven lab sessions scheduled over the course of the semester, as noted on the Course Roadmap below. The labs will meet in SPS 119 at 3322 Olive Street (adjacent to the Compton/Olive garage at the northeast corner of campus). Please bring your *Companion* book to the labs.

Course Roadmap: This schedule is subject to change, depending on the progress of the class. Any changes will be posted to the course WebCT site and announced in class.

Jan 17: What is Political Research? Introduction to the course.

Jan 22 No Class

Jan 24: The Problem of Measurement Defining, measuring and operationalizing concepts; levels of measurement.
Readings: *Essentials* Chapter 1; Miller, Chapter 1.

Jan 29, 31: Explanations and Hypotheses Developing explanations, hypotheses, and hypothesis tests; observational design; selecting research topics.
Readings: *Essentials* Chapter 2; *Companion* Chapter 11; *handout*.

Feb 5, 7: Describing Variables How to describe the distribution of variables; making comparisons between variables; graphing relationships and describing patterns.
Readings: *Essentials* Chapter 3; Miller, Chapters 2, 4, and 8.

Feb 12: Lab 1—Introducing SPSS Readings: *Companion* Chapters 1–3.

Feb 14, 19: Controlled Comparisons Types of relationships among three variables; the concept of *control*; how to make controlled comparisons.
Reading: *Essentials* Chapter 4.

Feb 21: Lab 2—Transforming Variables and Controlled Comparisons Readings: *Companion* Chapters 4–5.

Feb 26, 28; Mar 5: Sampling and Inference Random samples; the central limit theorem; inference using the normal and t distributions; inference based on sample percentages and proportions.

Reading: *Essentials* Chapter 5.

Paper Topic Due: March 2nd, noon

Mar 7 Midterm Exam.

Mar 12–16 Spring Break: No Class

Mar 19, 21: Hypothesis Testing Statistical significance; independent-samples tests for differences of means and proportions.

Readings: *Essentials* Chapter 6 (pp. 130–139); Miller, Chapter 3.

Mar 26: Lab 3—Mean Inferences Reading: *Companion* Chapter 6.

Mar 28: Measures of Association Chi-square, lambda, and ordinal measures of association between variables.

Readings: *Essentials* Chapter 6 (pp. 139–151).

Literature Review and Research Design Due: March 30, noon

Apr 2: Lab 4—Chi-Square and Measures of Association Reading: *Companion* Chapter 7.

Apr 4: Linear Regression Correlation; bivariate regression; Reading: *Essentials* Chapter 7, pp. 154–65.

Apr 9 Easter Recess: No Class

Apr 11: Lab 5—Linear Regression Reading: *Companion* Chapter 8.

Apr 16: Multiple Regression Dummy variables; multiple regression; interaction effects. Reading: *Essentials* Chapter 7, pp. 165–75; Miller, Chapters 9–10.

Apr 18: Lab 6—Dummy Variables and Interaction Effects Reading: *Companion* Chapter 9.

Apr 23, 25: Logistic Regression Limitations of OLS; the logistic regression approach; the maximum-likelihood principle; multiple logistic regression.

Reading: *Essentials* Chapter 8.

Apr 30: Lab 7—Logistic Regression Reading: *Companion* Chapter 10.

May 2: Exam Review/Slack Day Final Paper Due, beginning of class.

Monday, May 7, 2:00–3:50 p.m. Final Exam.