

**POLS 398 — Spring 2013**  
**Advanced Methods**

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Class: TuTh 1:30–2:45pm, Business Building 210  
Office Hours: Tu 3:00–5:00, Th 3:00–4:00  
*and by appointment.*

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## Course Description

This course is the follow up to the requisite POLS 298 course for political science majors. As all political science majors are expected to take the previous course and this course, it is assumed going into POLS 398 that students have already studied and master the material in POLS 298 whether through that course specifically or an equivalent course in a different discipline.

Fundamentally, our goal in political science is to develop theories that produce testable hypotheses about political behavior. This is a consistent goal throughout most subfields in political science, especially so in International Relations, Comparative Politics, and American Politics. In POLS 298, you have started to gain the basic tools to understand how we conduct social science in political science and this course broadens students' understanding of the tools that are available to them to test expectations they have about the world. A fundamental component of empirical research is the multivariate regression technique and much of this class is based on exploring how it works, can be applied, its limitations, and other options we have when we are not satisfied with it.

## Course Format

The course is primarily in a lecture format with computer aided instruction and lab time. As such, students are expected to attend class each day. Additionally, the lectures are not purely drawn from the course readings and students will be responsible for knowing both written materials as well as what is covered in lecture for any quiz, test, and written assignment.

## Course Objectives

Building on the skills gained in POLS 298 (Introduction to Political Inquiry), students in POLS 398 will learn research design and critical thinking skills, emphasizing the statistical techniques used to conduct multiple regression analysis. By the end of the semester, students will be able to:

1. analyze quantitative political science research datasets,
2. use a computer statistical software package, and
3. create a research report that answers a research question in political science.

## Required Text

There are three books required for the course:

1. Pollock, Philip H. III. 2011. *The Essentials of Political Analysis*. 4th edition. Washington, DC: CQ Press. **Referred to as Textbook for the remainder of the syllabus.**

2. Pollock, Philip H. III. 2011. *An SPSS Companion to Political Analysis*. 4th edition. Washington, DC: CQ Press. **Referred to as Workbook in the remainder of the syllabus.**
3. Berry, Dale. 1993. *Understanding Regression Assumptions*. Newbury Park, CA: Sage.
4. **Optional for those who prefer Stata:** Pollock, Philip H. III. 2009. *A Stata Companion to Political Analysis*. 2nd Edition. Washington, DC: CQ PRes.

SPSS software is the assumed statistical software for this class. This was the package you likely used in POLS 298. This does not require you to buy it for your home machine; all of the homework can be done without access to SPSS and the lab will certainly have the software.

## Course Requirements

### 1. Homework/Lab Assignments: 10%

Students will be assigned homework periodically through the course. Labs are due the same day in which they are assigned. Exercises are due prior to lab. All homework and lab assignments will be turned in as physical copies.

### 2. Three Major Examinations: 45%

Due to the nature of the course, the exams are necessarily cumulative. Each exam is worth 15% of your exam and will vary in format based on what the material covers.

### 3. Research Proposal: 5%

5% of the project will be from a one-page proposal where the students state their hypotheses and where they expect to get the data from for their test (**Due 3/14**). Guidelines:

- (a) a clear statement of the research question to be investigated
- (b) a brief explanation of the reason why the student considers this question to be an important one to answer
- (c) identification of an interval level dependent variable and no more than three independent (no more than one nominal level) variables
- (d) an explanation of how the student plans to operationalize each variable
- (e) the hypotheses to be tested
- (f) the equation the student plans to estimate using multiple regression analysis
- (g) identification of the data the student plans to use

### 4. Database Paper 15%

One of the key things you need to know in research is what data is available and what the data can or may mean. Students are expected to put together a 6–8 page paper that closely examines one existing database used in political science. The students will do a write up on the database, tease out any information they can from the data, as well as infer the utility of the database in various political science approaches. Ideally, this should be a database the students are considering using for their final project. **Due: 4/18 at 5pm.**

## 5. Hypothesis Testing Paper 25%

Each student will be required to write a 12-15 page paper that applies their newfound methodological skills to an area of politics that they are interested in. Students will be required to formulate a hypothesis, explain why they believe this relationship exists, collect the data present the relationship between the variables, and discuss whether or not their hypothesis was supported. The final paper is due on **Due 5/10 at 5:00pm**.

The final paper should include the following elements:

- (a) The research question. This should be grounded in a theoretical discussion and provide an explicit hypothesis being tested.
- (b) A review of the literature on your subject including scholarly, peer reviewed sources.
- (c) The unit of analysis.
- (d) The equation estimated as well as why the students model specification is expected to be a correct one.
- (e) Identification of the variables and how they were operationalized. For example, how is each variable being measured? Where did this data come from? What is the scale of the measurement?
- (f) The level of measurement of the independent variables
- (g) The results of the multiple regression estimation.
- (h) Discussion of results with reference to the tables
- (i) Discussion of the regression assumptions (autocorrelation, heteroskedasticity, linearity, multicollinearity, normality, residual outliers). There is a lot to discuss here, but you can do a lot of it based on visual assessments using scatter-plots and histograms of the data.
- (j) Assessment of the model, including its validity, how well supported the hypotheses were by the results, and the implications of the results for future research. What do your results mean for policy makers? For politicians? For politically active groups? etc.
- (k) A Bibliography. There is no set number of sources, but a good literature review will have a minimum of three sources per variable

Of note, the page count is text-based only. Figures, graphs, bibliography, and other related material is not included in the expectation. Consider using an appendix to include additional materials.

## General Guidelines and Information

1. **Lectures will begin on time.** Avoid arriving late to class; otherwise, you may miss important material, quizzes, or information about class assignments. However, being late is better than not showing up at all. If you do arrive late, attempt to arrive quietly into class and avoid making too much of a disruption. The same is true if you have to leave class early. If you miss any information due to your absence, ask a classmate for notes and to help you catch up. In general, it is a good policy to find people within the class that you can share notes with and be able to study collectively.
2. **Study guides and extra credit.** I do not offer either of these.
3. **Please avoid classroom disruptions.** Turn your cellphones to silent before class begins.
4. **Use the APSA style of reference.** To standardize citations and references, follow the guidelines set out by the *American Political Science Association*. Information and guidelines can be found in the following pdf file: <http://www.apsanet.org/media/PDFs/Publications/APSASStyleManual2006.pdf>.

5. **Cheating and plagiarism will not be tolerated.** All written work is subject to being submitted to SafeAssignment through Blackboard. This is a program that will find copied work from both published sources, the internet, and other work by students. Student who are found to be plagiarizing or cheating on a given assignment or test will automatically fail that assignment or test. If you wish to use work from another class, you must obtain permission from both instructors. Doing so without permission is a form of plagiarism.
6. **SafeAssignment:** All written assignments (this does not include normal homework/lab assignments) must be turned in through SafeAssignment given the appropriate links on Blackboard as well as providing a physical copy to the instructor/teaching assistant. The digital copy is due by 5pm on the day the assignment is due to be turned in. Assignments not turned in digitally as well as physically will not be graded and receive a zero for that assignment. If you have trouble with submitting an assignment, contact the instructor immediately.
7. **Missing exams and late assignments:** There will not be makeup exams or quizzes. Late paper assignments will be severely penalized—as such, having work completed early will increase your chances of avoiding penalties to your grade. The standard deduction will be one full letter grade per day that the assignment is late. That is, an B– will become a C–.
8. **Camtasia:** I intend to capture each lecture with the Camtasia software that is embedded in blackboard. The software captures both the audio from the lecture as well as the slides on the computer. This resource is intended to be a supplement to students to help them when they miss class, when they want to double check their notes, or are reviewing for an exam. However, there are a few caveats that come with the use of this software that students should be aware of:
  - (a) The lecture will be posted after the following class. A Tuesday lecture will be posted Thursday; a Thursday lecture will be posted the following Tuesday. In the case of an upcoming exam, I will post the lectures immediately.
  - (b) Recording quality is not guaranteed. The software relies on my internal microphone and, given the size of the classroom and my movement while lecturing, there will be times when the audio is not clear.
  - (c) Recording itself is not guaranteed either. The software partially relies on having a stable internet connection and if that goes out or is inaccessible, then I will not be able to record the class. Other technical difficulties may make recording problematic and thus, students should not come to expect that there all lectures will be recorded. It will be there as a luxury when possible.
  - (d) Finally, if the recordings negatively impact class (attendance, participation, etc.), then I will discontinue recording the lecture sessions.

Given these issues, students are strongly encouraged to attend class during the regular session.

9. **Lecture Pace:** I speak quickly. Some thoughts on how to deal with this:
  - (a) Ask questions.
  - (b) Ask me to go over or to give more detail about a particular issue.
  - (c) Use the recorded lecture format to fill in notes (discussed above).
  - (d) Use group notes so you can worry less about the slides and more about what is being talked about.
10. **Grade appeals.** If you believe that you were not graded appropriately for a given assignment and wish to contest that grade, you must do so in writing. Appeals will not be accepted for 48 hours from which the assignment was returned. The appeal should clearly state your objection and request that your work be re-evaluated. Re-evaluated work will be graded from scratch and the grade can be increase or decrease from the grade originally assigned.

11. **The syllabus.** the syllabus is a living document that can and will be altered throughout the duration of the course based both on need and design. Generally, this may mean readings will be removed or added as needed. All changes will be listed on Blackboard, so make sure to check announcements for any such change.
12. **Contacting the instructor.** The best way to get in touch with me is either through email. Any question that is of general interest to the entire class should may be answered in a way that provides the answer to the entire class.
13. **Accommodations:** To request academic accommodations for a disability contact the Disability Resource Center by phone, (208) 426-1583, or e-mail, [drcinfo@boisestate.edu](mailto:drcinfo@boisestate.edu). Students are required to meet with a Disability Specialist prior to receiving accommodations and may be required to provide documentation to clarify accommodation requests. Information about a disability is confidential. More information on the accommodation process can be found at <http://drc.boisestate.edu>.

## Final Grades

A: 93+  
 A-: 90–93  
 B+: 88–90  
 B: 83–88  
 B-:80–83  
 C+: 78–80  
 C: 70–78  
 D: 60–70  
 F: 0–60

Clarification: The upper limit is a boundary. For example, if a student’s final grade is an 82.3, they will get a B-; however, if they get an 83, they will receive a B.

## Course Schedule

This is the reading you are expected to have done *by the day it is assigned*. As mentioned earlier, the books are going to be the longest part and you should start reading them well in advance of the due date for discussion. Suggestions for readings will also be welcomed if they are offered early enough.

### Week 1

January 22nd	Introduction, Scientific Thinking
January 24th	Correlation
<b>Weekly Reading</b>	Textbook, Chapter 1-2, 8
<b>Assignments</b>	Textbook, Chapter 8, ex. 1 (Due 1/24)

### Week 2

January 29th	Correlation and Simple Regression Introduction
January 31st	Lab: Simple Regression, Workbook, Chapter 8, ex 1
<b>Weekly Reading</b>	Textbook, Chapter 1 & 8; review chapter 6
<b>Assignment</b>	Textbook Chapter 8, ex 2 (Due 1/31)
<b>Recommended Reading:</b>	(?)

### Week 3

February 5th  
February 7th  
**Weekly Reading  
Assignment**

Simple Regression: Interpretation & Assumptions  
Lab: Workbook Chapter 8, Exercise 2  
Textbook, Chapter 8  
Textbook, Chapter 1, Exercise 1 (Due 2/7)

### Week 4

February 12th  
February 14th  
**Weekly Reading  
Assignment**

Simple Regression: Assumptions (Continued)  
Lab: Workbook, Chapter 8, Exercise 3  
Textbook, Chapter 8  
Textbook, Chapter 8, Exercise 3 (Due 2/14)

### Week 5

February 19th  
  
February 21st  
**Weekly Reading  
Assignment**

Multiple Regression: Interpretations & Assumptions  
I  
Lab: Workbook, Chapter 8, Exercise 4  
Textbook, Chapter 8  
Berry, Chapter 1  
Textbook, Chapter 8, Exercise 4 (Due 2/21)

### Week 6

February 26th  
February 28th  
**Weekly Reading**

**Test #1**  
Multiple Regression: Interpretation & Assumptions II  
Textbook, Chapter 8  
Berry, Chapter 2-3

### Week 7

March 5th  
  
March 7th  
**Weekly Reading**  
  
**Assignment**  
**Recommended Reading:**

Multiple Regression: Assumptions and Model Building I  
Lab: Workbook, Chapter 8, Exercise 5  
Textbook, Chapter 8  
Berry, Chapter 4 & pages 22-41  
Textbook, Chapter 8, Exercise 5 Due (3/7)  
(?)

### Week 8

March 12th  
March 14th  
  
**Weekly Reading**  
  
**Assignment**

Project Discussion, Open Lab  
Multiple Regression: Assumptions and Model Building II  
Textbook, Chapter 8  
Berry, pages 41-67  
Proposal Due 3/14

## Week 9

March 19th  
March 21st  
**Weekly Reading**

### Assignment

Interaction Effects  
Lab: Workbook, Chapter 8, Exercise 6  
Textbook, Chapter 8  
Berry, pages 67–82  
Textbook, Chapter 8, Exercise 6 (Due 3/21)

## Spring Break

## Week 10

April 2nd  
April 4th  
**Weekly Reading**

Multicollinearity  
Heteroskedasticity and Lab: Database Project  
Textbook, Chapter 8

## Week 11

April 9th  
April 11th

Review for Test  
**No Class, MPSA**

## Week 12

April 16th  
April 18th  
**Weekly Reading**

Exam #2  
Lecture LPM  
Textbook, Chapter 9

## Week 13

April 23rd  
April 25th  
**Weekly Reading**  
**Assignment**

Moving Towards Logistic Regression  
Lab: Workbook, Chapter 9, Exercise 1  
Textbook Chapter 9  
Database paper is due April 23rd at 1:30pm via Safe-Assign  
Textbook, Chapter 9, Exercise 1 (Due 4/25)

## Week 14

April 30th  
May 2nd  
**Weekly Reading**  
**Assignment**

Logistic Regression II  
Lab: Open for Final Project  
Textbook, Chapter 9  
Textbook, Chapter 9, Exercise 2 (Due 5/2)

## Week 15

May 7th  
May 9th  
**Assignment**

Preview of other MLE techniques  
Lab: Open for final project  
Final Project Due 5/10 at 5pm

## Final

Thursday, May 16th, 2012

2:30pm–4:30pm

# List of Articles

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