

POL 3085: Quantitative Analysis in Political Science

Summer 2013

Anderson Hall 150 (Blegen 440 Lab)

Tuesdays & Thursdays, 9:15am – 12:15pm

Philip Chen

chen2157@umn.edu

Social Sciences 1231

(612) 624-0864

Office Hours: Wednesdays, 10:00am – 12:00pm

Course Description

Political Science 3085 is an upper-level undergraduate course designed to introduce you to quantitative political analysis. Political scientists use statistics and data to explore a wide variety of questions and topics including voting behavior in the United States and other democracies, how democracy influences economic growth, and whether the American public is becoming more or less polarized. These are just a few of the many political questions that political scientists try to answer with quantitative analyses. This course will give you the tools to begin your own examination of these types of questions.

This course focuses on issues of research design, hypothesis formation, causation, basic statistical techniques, and how to use computer software to manage data and perform these calculations. By the end of the semester, you will be able to:

- Develop testable research questions and hypotheses
- Design research to answer these questions and hypotheses
- Apply statistical techniques with quantitative data to answer these questions and hypotheses
- Present and explain your results using ordinary language
- Consume and evaluate academic research and political news that use quantitative data

Office Hours and Help

I understand that math and statistics does not come easily to many people (including myself). I want this course to be understandable to everybody while providing you with the tools you need to succeed. Please do not hesitate to contact me if you have any questions. Email is the best way to reach me outside of office hours. The course content builds on itself so it is important to understand what we are doing in class in order to understand the next section.

Course Prerequisites

There are no formal prerequisites for this class. However, because of the math involved in the course, it is assumed that students have completed high school algebra. As this is an upper level political science course, we assume students have completed at least one year of political science classes.

Required Texts

Philip H. Pollock. 2011. *The Essentials of Political Analysis, 4th Edition*.

Philip H. Pollock. 2011. *A STATA Companion to Political Analysis, 2nd Edition*.

Janet Johnson and H.T. Reynolds. 2012. *Political Science Research Methods, 7th Edition*.

The books are available for purchase at the University bookstore. You can also find cheaper versions online. If you choose to buy a used copy of the workbook, make sure that the data CD is included and that the workbook has all of the pages. Also, make sure that you get the STATA companion (there is also a workbook for a different statistics program, SPSS, that we will not use).

Software

This course will be using the statistical software STATA for many of the assignments. We will hold lab sessions during our class. There will be time during class to work on your assignments. However, on occasion you may need to use STATA outside of class time. A list of computer labs on campus with STATA can be found online at:

<http://www.oit.umn.edu/computer-labs/software/index.htm>

Grading

1. Homework Assignments (30%)

There will be regular homework assignments to help you apply the information from the readings. These ensure that everybody is following and understanding the material.

Homework assignments will be a combination of textbook problems, STATA problems, and tasks to help you do well on the final project. All homework assignments must be turned in as a hard copy. **All assignments are due at the beginning of the class period on the assigned due date. If you turn in your homework assignment after the beginning of class it will be considered one day late.** Make sure that you schedule enough time so you can find a lab in which to do your work.

2. Final Research Project (30%)

Each student will choose a research topic and conduct an analysis on social science data. A portion of your grade for this project will be based on a presentation you give on your paper during the last week of class. You will also be given a several short assignments to help you identify your research topic for the paper. These short assignments are required. More information will be distributed during the semester with details about the paper.

3. Midterm Test (30%)

An in-class midterm is scheduled for July 16th. The midterm will be paper and pencil. A calculator will be required. **Make sure you bring a calculator. Computers, tablets, iPads, cell phones, and anything this isn't a calculator are NOT acceptable calculators. The University bookstore sells calculators and Amazon has scientific calculators for under \$10.**

4. Class Participation (10%)

Participation is important, it makes sure you understand the material and it helps me know when something isn't clear and needs more explanation. Because of this, a portion of your grade will be based on your involvement in class discussions, in-class assignments, and attentiveness in class.

Grades directly pertain to your achievement in this course. University policy defines the meaning of grades and what level of achievement grades reported on your transcript pertain to.

A-F Grade Base:

A: Achievement **outstanding** relative to the level necessary to meet course requirements.

B: Achievement **significantly above** the level necessary to meet course requirements.

C: Achievement **meeting the basic course requirements** in every respect.

D: Achievement **worthy of credit** even though it does not meet the full basic course requirements in every aspect.

F: Performance **failing to meet the basic course requirements**.

A	93-100	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	<60

Course Outline

The course schedule may change. If it does, I will post changes on the course website and announce them in class. Readings should be completed before class on the day they are listed. For example, there are no readings for the first class (June 18) but you should have read Chapter 1 from *Political Science Research Methods*, selections from chapters 3 and 4 from *Essentials of Political Analysis*, and Lupia (2000) **before** class on June 20.

June 18: Introduction to Political Science Research

- No Readings
- *Assignment #1* Handed Out (Due June 27th)
- *Paper Assignment #1* Handed Out (Due June 25th)

June 20: Research Design – Research Questions, Literature Reviews, Hypotheses

- Read
 - *Political Science Research Methods* –Chapter 3 (pages 74-101) and selections from Chapter 4 (pages 102-119)
 - *Essentials of Political Analysis* – Selections from Chapter 3 (pages 48-58)
 - Lupia, A. 2000. “Evaluating Political Science Research: Information for Buyers and Sellers.” *PS: Political Science and Politics* 33(1): 7-13. **Available on Moodle**

June 25: Defining and Measuring Concepts

- Read
 - *Political Science Research Methods* – Selections from Chapter 4 (pages 119-126) and all of Chapter 5 (127-164)
 - *Essentials of Political Analysis* – Chapter 1 (pages 6-27)
- Due
 - **Paper Assignment #1**
- *Paper Assignment #2* Handed Out (Due July 2nd)

June 27: Displaying and Describing Variables

- Read
 - *Political Science Research Methods* – Chapter 5 (pages 127-164)
 - *Essentials of Political Analysis* – Chapter 2 (pages 28-47)
- Due
 - **Assignment #1**
- *Assignment #2* Handed Out (Due July 9th)

July 2: Logic of Comparison and Making Comparisons

- Read
 - *Essentials of Political Analysis* – Selections from Chapter 3 (pages 58-77) and all of Chapter 4 (pages 78-101) and Chapter 5 (pages 102-121)
- Due
 - **Paper Assignment #2**
- *Paper Assignment #3* Handed Out (Due July 16th)

July 4: NO CLASS – Happy 4th of July!

July 9: Statistical Inference: Hypothesis Testing

- Read
 - *Essentials of Political Analysis* – Chapters 6 and 7 (pages 122-181)
- Due
 - **Assignment #2**
- *Assignment #3* Handed Out (Due July 25th)

July 11: Statistical Inference: Confidence Intervals

- Read
 - *Political Science Research Methods* – Chapter 12 (pages 396-427)

July 16: Midterm Exam/Open Lab Session

- Due
 - **Paper Assignment #3**
- *Final Paper Assignment* Handed Out (Due August 8th, 2 PM)

July 18: Linear Regression I

- Read
 - *Political Science Research Methods* – Selections from Chapter 13 (pages 490-521)
 - *Essentials of Political Analysis* – Chapter 8 (pages 182-211)

July 23: NO CLASS – OPEN LAB

July 25: Linear Regression II

- Read
 - *Political Science Research Methods* – Selections from Chapter 14 (pages 527-568)
- Due
 - **Assignment #3**
- *Assignment #4* Handed Out (Due August 8th)

July 30: Logistic Regression

- Read
 - *Political Science Research Methods* – Selections from Chapter 14 (pages 568-593)
 - *Essentials of Political Analysis* – Chapter 9 (pages 212-239)

August 1: Experiments

- Read
 - *Political Science Research Methods* – Selections from Chapter 6 (pages 165-190)
 - Mondak, J. 1995. "Newspapers and Political Awareness." *American Journal of Political Science* 39(2): 513-527. **Available on Moodle**
 - Brady, H.; Herron, M.; Mebane Jr., W.; Sekhon, J.; Shotts, K.; & Wand, J. 2001. "Law and Data: The Butterfly Ballot Episode." *PS: Political Science and Politics* (1): 59-69. **Available on Moodle**

August 6: Surveys

- Read
 - *Political Science Research Methods* – Chapter 10 (pages 306-353)
 - Squire, P. 1988. "Why the 1936 Literary Digest Poll Failed." *Public Opinion Quarterly* 52(1): 125-133. **Available on Moodle**

August 8: Class Presentations

- Due
 - **Assignment #4**
 - **Final Paper (by 2 PM)**