

**POL 51**  
**The Scientific Study of Politics**  
WINTER 2014

**Instructor:** Wilfred M. Chow

**Time and Location:** T, R 2:10-4:00 pm, Olson 207

**Email:** wmchow@ucdavis.edu

**Office Hours:** T, R 1:00-2:00 pm, Kerr 574

## Overview and Objectives

This course will cover how to evaluate statistical studies in politics. We will begin with how to quantify and measure theoretical concepts. To that end, we will explore the following questions:

- How do we collect and assess data?
- Given this data, how can we test the relationships between two variables?
- How do we distinguish between correlation and causation between two variables?
- What does it mean for evidence to be significant?

To learn this material, you will be assigned a number of problem sets and exams. Be warned, the material in this class demands careful attention to lectures, the assigned readings, and problem sets. You will also be asked to use R to analyze data. Essentially, this course is partially an introductory statistics course.

## Requirements

This course is designed to expose you to a systematic approach to quantitative analysis of politics and social science more broadly. To achieve this goal, you will be asked to learn statistical concepts from the textbook and lecture, which you will apply in the problem sets. Throughout the quarter, you will also be asked to read a number of articles that apply the theoretical concepts from the textbook. These articles will all be available on Smart Site.

The problem sets will involve writing and/or analysis of political and economic data and puzzles. The content and structure of the problem sets will be discussed in further detail in class. You should expect anywhere between four to six problem sets throughout the quarter. Because the exam will be largely based off the problem sets and lecture, it is vital that you do the problem sets.

I warn you ahead of time that you will need to take the course (as with any course) seriously. The material for this course is challenging and will require regular attendance to lectures and meaningful participation in lecture.

Your grade is broken down into the following categories:

- Class Discussion/Attendance: 5 percent (with 2 absences allowed)
- Problem Sets: 25 percent
- Midterm: 30 percent
- Final: 40 percent

## Administrative Policies

All exams must be taken at the time prescribed in the syllabus. No make-up exams will be administered except on the rare occasion where students have documented proof that they were incapacitated or otherwise unable to take the exam. Homework and problem sets are due on the date given to you in class. Late problem sets will not be accepted. Problem sets that are emailed to me *will not be accepted*, unless otherwise noted and authorized by me. Exams that are not taken, problem sets that are not turned in, and late problem sets that are not accepted means you will receive a grade of 0 on that particular problem set. You will be given an “optional” problem set at the end of the quarter, which will replace your lowest scoring problem set. This assignment should be used to make up a problem set that cannot be turned in due to unforeseen circumstances.

You are also required to become familiar with the UC Davis Code of Academic Conduct (<http://sja.ucdavis.edu/cac.html>). Cheating, plagiarism, and harassment in any form will not be tolerated. Do not do these things. Also, in lecture, cell phones must be turned off. Usage of cell phones (or any other personal communication devices) in class is prohibited. Usage of cell phones (or any other personal communication devices) during exams will be viewed as evidence of cheating, whether the student was or was not cheating.

With respect to students with disabilities, students requesting special accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the instructor when requesting accommodation. Please do this at the beginning of the quarter, and schedule all exams and assignments as appropriate with the instructor at the beginning of the quarter. Do not wait until right before the exams.

## Required Texts

- Lane, D., Scott, D., Hebl, M., Guerra, R., Osherson, D., and Zimmer, H. (2013). *Online Statistics Education: A Multimedia Course of Study* (<http://onlinestatbook.com/>). Rice University referred to as OSE for the remainder of the syllabus.

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## Course Outline

### Week 1

**Jan. 7:** Course Introduction

**Jan. 9:** The Logic of Comparison

- OSE pp. 10-28 (optional: read all of chapter 1)

### Week 2

**Jan. 14:** Central Tendency and Spread of Distributions

- OSE pp. 123-135 and 144-155 (optional: read all of chapter 3)

**Jan. 16:** Visual Display of Data and Interpretation

- OSE pp. 40-52, 65-75, 82-86, 92-100 (optional: read all of chapter 2)
- Dalgaard 4.1-4.5
- Read “Understanding and Interpreting Box Plots”

### Week 3

**Jan. 21:** Causality and the Experimental Ideal

- Read Freedman’s “On types of scientific inquiry: The role of qualitative reasoning”
- Angrist, J. D. and Pischke, J.-S. (2008). *Mostly Harmless Econometrics: An Empiricist’s Companion*. Princeton University Press, Princeton Chapter 1
- OSE pp. 222-246

**Jan. 23:** Normal Approximation

- OSE pp. 249-267

### Week 4

**Jan. 28:** Introduction to Sampling

- Dalgaard 3.1
- OSE pp. 300-323

**Jan. 30:** Introduction to Rational Choice

- Satz, D. and Ferejohn, J. (1994). Rational choice and social theory. *The Journal of Philosophy*, 91(2):71–87

- MacDonald, P. K. (2003). Useful fiction or miracle maker: The competing epistemological foundations of rational choice theory. *American Journal of Political Science*, 97:551–565

## Week 5

### Feb. 4 Game Theory and Constructing Theories

- Myerson, R. (1992). On the value of game theory in social science. *Rationality and Society*, 4:62–73

### Feb. 6: Midterm Review/Catch Up

## Week 6

### Feb. 11: Midterm Exam (Tentative)

### Feb. 13: Introduction to Hypothesis Testing

- OSE pp. 370-393

## Week 7

### Feb. 18: Testing Means

- OSE pp. 399-439

### Feb. 20: Introduction to Regression

- OSE pp. 462-509

## Week 8

### Feb. 25: Regression Application: Origins of Racial Exclusion in the U.S.

- Lang (2007) Chapter 10
- Acemoglu and Robinson (2012) Chapter 12

### Feb. 27: Regression Application: Policies Addressing Discrimination in the U.S.

- Sander 2012 “The Painful Truth About Affirmative Action”
- Scotus Interview of Richard Sander
- Fryer and Loury (2005)
- Sowell (2004) Chapter 6

**Week 9**

**Mar. 4:** History of Racial Exclusion in South Africa

- Acemoglu and Robinson (2012) Chapter 9
- Fearon (1999)

**Mar. 6:** Policy Responses to Racial Exclusion in South Africa

- Ihedru (2004)

**Week 10**

**Mar. 11:** Racial Politics in India

- de Zwart (2000)
- Sowell (2004) Chapter 2 (India)

**Mar. 13:** Policy Evidence of Affirmative Action in India and Malaysia

- Bertrand, Hanna and Mullainathan (2010)
- Sowell (2004) Chapter 3 (Malaysia)

**Final Exam**

**Final Exam Time:** Saturday, Mar. 22 from 1:00 - 3:00 pm in Olson 207