Political Science 366
RESEARCH IN POLITICS
Fall 2014

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Office Hours: Tuesday 1-2, Thursday 2-3, Wednesday 1-2:30
Other times by appointment.

This quarter we will play with numbers. We will learn to use a variety of statistical techniques to answer questions about politics. The statistical techniques and computer software we will use are fairly simple but powerful analytical tools. Using several datasets, we will be able to address questions such as: how are individuals' religious preferences related to their political attitudes? How are individuals' effective tax rates related to their voting behavior? How are state labor laws related to median household income? What is the relation between women's empowerment and national GDP per capita? This list could be extended but I will stop here.

The point of our efforts is to have fun while learning about how one can use numbers to answer questions about politics and public policy. Toward those ends, we will study how variables are defined, measured, and analyzed using basic tools from descriptive and inferential statistics. Some of the methods we will learn include tabular analysis, two-sample comparison of means, Analysis of Variance, and linear regression. Our emphasis will be on statistical literacy and use rather than theory. These competencies require the use of some mathematics. Thus students should enter this course familiar with basic algebra. The textbook includes a review of the necessary mathematics. Most students have little trouble in this regard. Students who attend class every day, complete homework and lab assignments on time, and ask questions in class and during my office hours do well in this course. They are also often surprised by how much they enjoy playing with data.

Assignments and Evaluation of Student Performance:
Grades will be calculated based on a 100-point scale. You will accumulate points by completing written assignments. Assignments include statistical exercises, quizzes, a midterm examination, a research project, and a final examination.

For your own benefit, as well as that of the class as a whole, I encourage you to participate in classroom discussions and exercises. If your participation is noteworthy, I will raise your grade above that calculated from your total points. The allocation of credit for assignments will look something like the following:

Lab Exercises	16%
Midterm	24%
Quizzes	8%
Research Project	20%
Final Exam	32%

Text:
Frankfort-Nachmias, Chava and Anna Leon-Guerrero. 2015. *Social Statistics for a Diverse Society*. Seventh edition. Los Angeles: Sage Publications.

Schedule of Class Meetings:
On Tuesdays and Thursdays we will meet in AH 30 for lecture and discussion of readings and problems from the Frankfort-Nachmias and Leon-Guerrero text. Most Wednesdays we will meet in the Arntzen 05 computer lab for instruction and practice in data analysis. Lab sessions will not be long enough for you to finish lab exercises; you will need to spend more time in the computer lab on your own. You will make most efficient use of lab sessions if you have read the assignment carefully prior to class.

The following schedule is tentative; revisions will be made throughout the quarter. I may add to or omit exercises and quizzes or change the dates of assignments. You are responsible for being of aware of any changes in the schedule.

Date	**Topics and Reading**
9/24	Lab Exercise 1: Characterizing Distributions, Chs 1-2
9/25	Statistics, Science, and Powerful Citizenship, Ch 1-2
9/30	Central Tendency, Ch 3-4
10/1	Lab Exercise 2: Central Tendency, Chs 3-4
10/2	Quiz 1: Central Tendency and Levels of Measurement (Ch 4) Measures of Variability I, Ch 5
10/7	Measures of Variability II, Ch5 The Normal Distribution, Ch 6 Sampling Distributions
10/8	Lab Exercise 3: Variability, Chs 5-6
10/9	No Class: Professor Salazar will be away at a conference. Read Ch 7, Sampling
10/14	Quiz 2: Dispersion and Z-scores (Chs 5-6) Sampling, Ch 7 Confidence Intervals, Ch 8
10/15	Lab Exercise 4: Sampling and Confidence Intervals, Chs 7-8

10/16	Confidence Intervals, Ch 8
10/21	Hypothesis Testing: Sample Means, Ch 9, 267-289
10/22	Lab Exercise 5: t-Tests, Ch 9
10/23	Quiz 3: Confidence Intervals (Ch 8) Hypothesis Testing: Sample Proportions, Ch 9, 289-302
10/28	Cross Tabulation, Ch 10
10/29	Quiz 4: Hypothesis Testing, Ch 9 Lab Exercise 6: Chi Square and Tabular Analysis, Chs 10-11
10/30	Chi Square, Ch 11
11/4	**Midterm: Chs 1-9**
11/5	Chi Square, Ch 11
11/6	Regression: Estimating the OLS Line, Ch 13, 413-432
11/11	Holiday
11/12	Lab Exercise 7: Correlation, Regression, Ch 13 Lab Exercise 8: ANOVA, Ch 12
11/13	Regression: Testing Hypotheses about the Slope, Ch 13 Regression: Coefficient of Determination, Ch 13, 432-450, 454-476
11/18	ANOVA: Hypothesis Testing, Ch 12 (OMIT formula 12.3, p393)
11/19	Lab: Research Paper Data Analysis
11/20	ANOVA: Decomposing the Sums of Squares I, Ch 12 (OMIT formula 12.3, p393) Quiz 5: Correlation and Regression
11/25	ANOVA: Decomposing the Sums of Squares II, Ch 12 (OMIT formula 12.3, p393)
11/26-27	Holiday
12/2	ANOVA and Multiple Regression, Ch 13, 450-453

12/3	No Lab: Research Papers Due
12/4	Statistics and the Study of Politics
12/11,1-3	Final Examination