OXFORD COLLEGE OF EMORY UNIVERSITY
POLITICAL SCIENCE 308: POLITICAL SCIENCE METHODS

FALL 2010

TU & TH 11:30-12:45
(SENEY 322)

PROFESSOR: KATIE VIGILANTE
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A bad statistic is harder to kill than a vampire

- Joel Best (Author, *Stat-Spotting and Damned Lies and Statistics*)

Course Description & Objectives

This is a course on social science research methods applied to political phenomena. POLS 308 is a required course for all students majoring in Political Science or International Studies at Emory University.

The course is designed to introduce students to:

The style of analytic thinking required for research in the social sciences (the scientific method).

1. The concepts and procedures used in the conduct of empirical research in political science (*statistics*).
2. The use of computers for analysis of quantitative social science data *(stata software©).*

Our objective is to give you a foundation in research design and empirical methods so you can become an informed student of public affairs and specifically, of research reported in major journals in political science. Additionally, we want to provide you practice in data analysis skills as a means of introduction to political science methods for your own research.

Our focus will be on quantitative analysis, which depends on a dreaded area for many students: **STATISTICS**.[1] That's right, if you want to analyze data you will need to know the variety of techniques used to understand and evaluate those data: ***statistics***.

We focus on a variety of statistics, from simple descriptive statistics and graphs, to tests of bivariate association, to a basic introduction to multivariate analysis

You do not need any more math background than high school algebra. Moreover, we will have a math review session.

For statistical software, we will use *Stata*©, perhaps the most popular package among political scientists. It is installed in computers in Pierce 206 and Kaliedescope Lab; additionally, you can purchase it cheaply for home use as well. A student version is recommended for the course, costing 45.00.

Statistical Computing Support

We have a license agreement through Emory and Stata Corp. to run 20 stata sessions at a time (from either mac or pc) from any computer lab on campus. You can also purchase a personal copy of Stata at a reduced price; the program is relatively affordable, as these things go, and we have made provisions for you to purchase it at a discount if you wish to purchase it (less than $100 for a one-year license). To obtain the discount, you must call the Stata Corporation at 800-782-8272, saying that you are part of the "GradPlan III" for Emory University, if you want to place an order; or go to http://www.stata.com/order/new/edu/gradplans/gp-campus.html.

Requirements

Grades in the course will be based on the following items:

%	Graded Item	Description
20	Homework	Weekly HW—Includes portions of your report
25	Midterm exam	October 19
25	Final exam	December 13 (9-12 Noon)
30	Research Report	December 7

[1] Also referred to as 'sadistics', 'the things that are 'killing me', 'torture devices' ad infinitem

Successful completion of this course requires not only that a student learn the substance of research methods and data analysis, but also that he or she learn associated practical skills. The midterm and final examinations will each include questions demanding knowledge of details of basic Stata commands and output.

Reading Materials

There are two textbooks for this class:

- Janet Buttolph Johnson and H. T. Reynolds, with Jason D. Mycoff, *Political Science Research Methods*, 6th ed. (Washington, DC: CQ Press, 2008).
- Philip H. Pollock III, *A Stata Companion to Political Analysis* (Washington, DC: CQ Press, 2006).

These books are available in the bookstore.

All other assigned readings are stored in BLACKBOARD in "course documents"

Course Outline

Aug 26 (Th): Introduction: Political Science?

Johnson and Reynolds (herein J&R), Ch. 14

Assigned: HW: 3 Research Questions

Aug 31 (Tu): The scientific method and the study of politics
J&R Ch. 1 & 2

HW DUE: 3 Research Questions (Pick ONE)

Sept 2 (Th): Introduction to Statistics/Math Review

Assigned HW: Statistics Handout (fun and informative)

Sept 7 (Tu): Research Design Part I: Hypotheses, Concepts, and Variables
J&R Ch. 3
Reread Examples from J&R Ch. 1

HW DUE: Statistics Handout

Sept 9 (Th): Research Design Part II: Measurement
J&R Ch. 4 & Pollock Ch. 1

Assigned HW: Pollock Ch. 1 exercises & Your Dependent Variable

Sept 14 (Tu): Research Design Part III: Experimental versus Non Experimental

J&R Ch. 5

AND

Alan S. Gerber and Donald P. Green, "Do Phone Calls Increase Voter Turnout? A Field Experiment," *Public Opinion Quarterly* 65 (Spring 2001), 75-85

Sept 16 (Th): The Literature Review: What is it? Why do it? Where do research topics come from? How do I begin?
J&R Ch. 6

HW DUE: Pollock Ch. 1 exercises & Your DV
Assigned HW: Bibliograhy & Introduction

Sept 21 (Tu): Library Visit and Information Session for Source Collection for your topics

Meet at Library-**ATTENDANCE IS MANDATORY**

Sept 23 (Th): Presenting Data and Data Distributions; Measures of Central Tendency

J&R CH. 11 (pp. 351-383) & Pollock Ch. 2

HW DUE: Bibliograhy & Introduction
Assigned HW: Pollock Ch. 2 Exercises

Sept 28 (Tu): Data transformations and graphing
J&R Ch. 11 (from pp. 383-393)

Sept 30 (Th): Variablity: Measures of Dispersion (which Measures do we use when?)
J&R Ch. 11 (pp. 360-383)

HW DUE: Pollock Ch. 2 Exercises
Assigned HW: Pollock Ch. 3 & 4

Oct 5 (Tu): STATA TIME (**ATTENDANCE MANDATORY**)

Oct 7 (Th): Sampling and Probability
J&R Ch. 7

HW DUE: Pollock Ch. 3 & 4
Assigned HW: Pollock Ch. 5 Exercises & Literature Review

Oct 12 (Tu): **OFF FALL BREAK**

Oct 14 (Th): Statistical Inference & Hypothesis Testing
J&R Ch. 11 (pp. 393-425)
Pollock Ch. 5

HW DUE: Pollock Ch. 5 Exercises & Literature Review

Oct 19 (Tu): **MIDTERM EXAM**

Octr 21 (Th): Hypothesis Workshop **(Attendance Mandatory)**

Oct 26 (Tu): Bivariate analysis I: comparing means with t-tests
J&R Ch. 12 (pp. 426-431)
Pollock Ch. 6

Assigned HW: Pollock Ch. 6 Exercises and 3 Hypothesis

Oct 26 (Tu): Bivariate analysis II: crosstabs and the chi-squared test

J&R Ch. 12 (pps. 431-462)
Pollock Ch. 7

Oct 28 (Th): Bivariate analysis III: Correlation and Regression
J &R Ch. 12 (pps. 477-498)

HW DUE: **Pollock Ch. 6 Exercises**
Assigned HW: Pollock Ch. 7 exercises & Data and Methods

Nov 2 (Tu): Bivariate Analysis: Regression
Pollock Ch. 8 (stop p. 147)

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Nov 4 (Th): Multivariate Anaysis: Analysis of Categorical Data
J&R Ch. 13 (pp. 503-514)
Pollock, Ch. 8 (complete)

HW DUE: Pollock Ch. 7 exercises & Data and Methods
Assigned Pollock Ch. 8 & 9 exercises

Nov 9 (Tu): Multivariate Analysis: Multiple Regression with Dummy Variables
J&R Ch. 13 (pp. 514-526)
Pollock Ch. 9 (to page 164)

Nov 11 (Th): Multivariate Analysis: Multiple Regression and Interaction Effects
Pollock Ch. 9 (complete)

HW DUE: Pollock Ch. 8 & 9 exercises
Assigned HW: Pollock Ch. 10 exercises

Nov 16 (Tu): Multivariate Analysis: Logistic Regression
J&R Ch. 13 (pp. 526-549)
Pollock Ch. 10

Nov 18 (Th): Multivariate Analysis: Logistic Regression Continued

HW DUE: Pollock Ch. 10

Nov 23 (Tu): **In-Class Lab (Attendance Mandatory)**
J&R Ch. 14

Nov 24 (Th): **OFF TG HOLIDAY**

Nov 30 (Tu): **In-Class Lab (Attendance Mandatory)**

DUE: INTRODUCTION, LITERATURE REVIEW, DATA, & ANALYSIS

Dec 2 (Th): **In-Class Lab (Attendance Mandatory)**

Dec 7 (Tu): **Final Research Reports Due**

Dec 13 (M): **FINAL EXAM (9-12 Noon)**