TECHNIQUES OF POLITICAL ANALYSIS:
Political Science 585
Autumn Quarter 2005

"Torture numbers, and they'll confess to anything."—**Gregg Easterbrook**

"There are three kinds of lies—lies, damned lies, and statistics."—**Benjamin Disraeli**

"When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of the meager and unsatisfactory kind."—**Lord Kelvin**

Dr. Brett Curry, Lecturer
Class Hours: 11:30-1:18, MW
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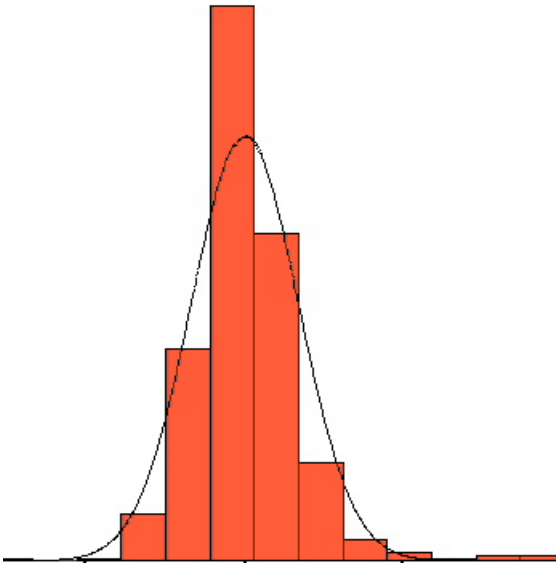

Course Description

This course is an introduction to the basic elements of quantitative research in political science. The course requires no prior experience with statistics, advanced mathematics, or computing, but a general competence with high school algebra is recommended. We will cover a number of topics together this quarter, including: variable measurement, theory, hypotheses, research design, descriptive summaries of variables, measures of association between variables, statistical inference, probability, significance testing, and

regression analysis. Our class sessions will consist of a mixture of lecture and more "hands-on" work with data and statistical software.

Course Goals

1. This course's primary goal is to equip students with the basic skills necessary to design and perform quantitative research, with specific emphasis on research in the field of political science.

2. Another important goal of this course is to familiarize students with SPSS, a popular and relatively easy to use statistical package for analyzing and displaying data.

Course Readings

Two books are required for this course, and each is available for purchase at SBX Bookstore. "Elementary Statistics in Social Research: The Essentials" is our primary textbook for the course. We will also be using the "SPSS Companion to Political Analysis" workbook as a tool for learning SPSS.

- **Elementary Statistics in Social Research: The Essentials (2004), by Jack Levin and James Alan Fox. Allyn-Bacon Publishers. (Referred to hereafter as "Levin and Fox")**
- **An SPSS Companion to Political Analysis (2005; 2nd Edition), by Philip H. Pollock III. CQ Press. (Referred to hereafter as "Pollock")**

Computer Software

We will be using a popular statistical package called SPSS in this course. All of the computers in our classroom are equipped with SPSS. The classroom has computer lab hours, and you are free to do your assignments in the lab when the room is available. I *highly recommend* that you acquire a *free* one-year license of SPSS through the Office of Information and Technology (OIT). You may either download the software online at http://osusls.osu.edu/upgrades/stg2wnx.html, or you can bring a blank CD-R to OIT Customer Service (512 Baker Systems) and they will burn you a copy of the installation CD. For both methods, you need to fill out a short license agreement form that allows you to get the license codes needed for installation. The above website has a link to the form, or you can retrieve the form from OIT. Let me know if you have any problems obtaining a copy of SPSS.

For exams (and some assignments) you will also need to have a calculator that is "advanced" enough to find square roots of numbers.

Course Requirements

Midterm Examination: 30% (150 points)
Final Examination: 30% (150 points)
Homework Assignments: 30% (4 assignments, for 150 total points)
Attendance and Participation: 10%* (40 points)

Examinations and Assignments

There will be two examinations in this course—an in-class midterm and a final examination that will be held on Monday, December 5th, from 11:30am to 1:18pm. I will inform you as to the exact format of each examination at least one week prior to the exam, but they will generally consist of multiple choice and short answer items.

You will also be required to complete four homework assignments during the quarter. Due dates for the assignments are given below, and **assignments MUST be given to me at the beginning of class on the date they are due—no exceptions. I WILL NOT ACCEPT ANY LATE HOMEWORK ASSIGNMENTS. If you will not be in class on the date the assignment is due, it is your responsibility to make arrangements with me to turn it in early.** In other words, you must turn in homework assignments during class time (or in my mailbox beforehand) unless I have specifically given you permission to do otherwise—and this will only happen in rare circumstances.

Any conflicts must be discussed with the instructor ***prior*** to all examinations. Further, if you happen to miss an exam due to an emergency that makes it impossible for you to consult with me beforehand, the burden of proof will be on you to demonstrate the legitimacy of your absence. **I am quite serious about this—college is not a sanctuary from responsibility, and making exceptions for students who act irresponsibly is not fair to the vast majority who "play by the rules."** (If an emergency does arise, discuss it with me as soon as possible! For instance, do not miss the midterm and come to me a week or two afterward and casually mention that you need to make it up sometime—I will NOT be sympathetic).

Attendance Policy

Given the cumulative nature of the material we will encounter in this course, it is vitally important that you attend class. Consequently, I will take attendance every class period. Because I understand that some of you may occasionally be unable to attend class, everyone has one "free" absence for which you will not be penalized.

Extra Credit Opportunities

You will have an opportunity to earn a small amount of extra credit (up to 2%) for this course. Details will be provided later in the quarter.

My Obligations to You

As your instructor, I have several obligations to you. First, I hope to create a classroom atmosphere that is pleasant, relaxed, and conducive to learning. I am committed to grading and returning your work promptly. You will also find that I am very approachable, should you have any questions or concerns.

Student Obligations

Although I will attempt to foster a comfortable atmosphere in the classroom, I would appreciate your cooperation in the following ways:

1. Come to class on time and stay to the end. This is in your own best interest, since the introduction and conclusion of class are often the most important parts.

2. Beeping papers and/or ringing cell phones are distracting and rude to both your instructor and fellow classmates. Please switch them off before class.

Academic Honesty

Academic misconduct, as defined by the University in the Student Handbook, **will NOT be tolerated**. All the work you do in this course is expected to be your own. No cheating on examinations is acceptable, and any suspected cases of academic dishonesty will be immediately reported to the university committee on academic misconduct and dealt with according to University policy.

In order to maintain academic honesty, no late-arriving student will be allowed to begin a midterm or final examination AFTER the first person finishes and leaves the room.

University-Mandated Language for GEC Courses: Rationale and Learning Objectives

"Courses in quantitative and logical skills develop logical reasoning, including the ability to identify valid arguments, use mathematical models, and draw conclusions based on quantitative data.

Data Analysis. Students understand statistics and probability, comprehend mathematical methods needed to analyze statistical arguments, and recognize the importance of statistical ideas."

Disability Services

Students with disabilities who feel they may need special assistance should inform me of their needs in a timely manner (rest assured, these discussions will be kept confidential). Course materials are available in alternative formats upon request. For such materials, please contact Mr. Wayne DeYoung, 2140 Derby Hall, 154 North Oval Mall, 292-2880.

Course Schedule and Assigned Readings

Week 1 (9/21):

W: Course Introduction

Week 2 (9/26, 9/28):

M: Research Design

W: Levels of Measurement
Levin & Fox, Chapter 1 (all)
Pollock, Chapter 1 (all)

Week 3 (10/3, 10/5):

M: Organizing the Data
Levin & Fox, Chapter 2 (all)
Pollock, Chapter 3 (pages 31-33)

W: Measures of Central Tendency
Levin & Fox, Chapter 3 (all)
Pollock, Chapter 2 (all) and Chapter 3 (pages 33-46)

Week 4 (10/10, 10/12):

M: Measures of Variability/Dispersion
Levin & Fox, Chapter 4 (all)
Pollock, Chapter 4

W: Probability
Levin & Fox, Chapter 5 (pages 77-90)

HOMEWORK #1 DUE (10/12)

Week 5 (10/17, 10/19):

M: Percentiles and Z-Scores
Levin & Fox, Chapter 5 (pages 90-97)

W: Sample Properties
Levin & Fox, Chapter 6 (pages 101-112)

HOMEWORK #2 DUE (10/19)

Week 6 (10/24, 10/26):

M: **MIDTERM EXAM**

W: Confidence Intervals
Levin & Fox, Chapter 6 (pages 112-125)
Pollock, Chapter 6 (all)

Week 7 (10/31, 11/2):

M: Differences in Means
Levin & Fox, Chapter 7 (all)
Pollock, Chapter 5 (all)

W: Analysis of Variance
Levin & Fox, Chapter 8 (all)

HOMEWORK #3 DUE (11/2)

Week 8 (11/7, 11/9):

M: Chi-Square and Nonparametric Tests of Significance
Levin & Fox, Chapter 9 (all)
Pollock, Chapter 7 (all)

W: Correlation
Levin & Fox, Chapter 10 (all)
Pollock, Chapter 8 (pages 133-138)

Week 9 (11/14, 11/16): CORRELATION AND ASSOCIATION

M: Regression I
Levin & Fox, Chapter 11 (all)

Pollock, Chapter 8 (pages 138-148)

W: Regression II
Pollock, Chapter 9 (all)

Week 10: (11/21, 11/23): ETHICS AND SOCIAL RESEARCH/THANKSGIVING

M: Ethics and Social Research

HOMEWORK #4 DUE (11/21)

W: No class. Happy Thanksgiving!

Week 11: (11/28, 11/30):

M: Research Approaches I

W: Research Approaches II/Course Wrap-Up

Final Examination: Monday, December 5, 11:30am-1:18pm