

Techniques of Political Analysis

This course provides an introduction to some of the basic research techniques and data analysis concepts used in doing research about politics. Included will be basic principles of sampling, measurement, and statistical analysis. Uses of the computer in aiding research will be emphasized throughout the course. There are no mathematical, statistical, or computer prerequisites for this course.

Political Science 585 is intended for:

- 1) students planning to go on to graduate work in political science who will be involved in research projects,
- 2) students planning careers in government service where data analysis will be required,
- 3) students planning to go to law school and want to be able to deal with quantitative arguments, and
- 4) general citizens who are increasingly faced with a need to understand data presented in the media.

Computer use: As part of the course, we will be using SPSS for Windows, which is based on one of the most popular social science statistics programs. Class sessions will be held in a Windows lab, room 0150 Derby. Several data sets will be made available for analysis with SPSS. The program can be purchased for one-year use under a university site license agreement for \$6.99 from Unicomp. Computer assignments will be done during class sessions, and the lab will have open hours if you need more time to finish assignments.

Course requirements: Computer exercises and homework assignments (25% of grade), short analysis paper (20%), midterm (25%), and final exam (30%). Late computer assignments will be penalized one full-letter grade per day late. The midterm will be given October 25, and the final is at the official final exam time for the course. The short analysis paper is due the last day of class.

Class attendance is strongly recommended. Data analysis and statistical techniques are highly cumulative, so it is very hard to follow later material without understanding earlier material and it is hard to catch up when behind. Also, computer assignments will be done during many class sessions, and lab assistance is guaranteed only during class sessions.

Texts:

Levin & Fox, Elementary Statistics in Social Research, 8th ed.

A short packet containing the other readings

Notices: Students with disabilities that have been certified by the Office for Disabilities Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs.

All of the work you do in this course is expected to be your own. Absolutely no cheating or plagiarism (using someone else's words or ideas without proper citation) will be tolerated. Any cases of cheating or plagiarism will be reported to the university committee on academic misconduct and handled according to university policy.

Course Schedule

Studying Politics Quantitatively

Key concepts: theory, hypothesis, concepts, operational definitions, variables, dependent variable, independent variables, causal hypothesis, relationship, unit of analysis, ecological fallacy, values in research, levels of measurement

Thurs. Sept. 20: Introduction

Tues. Sept. 25: Levels of Measurement: Levin & Fox, chap. 1

Thurs. Sept. 27: No Class

Measurement and Analysis of a Variable

Key concepts: measurement, reliability, validity, frequency tables, graphs, distributions, measures of central tendency, mean, median, mode, variability, variance, standard deviation

Tues. Oct. 2: Frequency Distributions: Levin & Fox, chap. 2

Thurs. Oct. 4: Central Tendency: Levin & Fox, chap. 3

Tues. Oct. 9: Variability: Levin & Fox, chap. 4 & Appendix B

Activities: Use computer to graph single variables and to calculate measures of central tendency and variation. Also a homework assignment involving hand calculation of measures of central tendency and variation.

Probability, Sampling, & Statistical Inference

Key concepts: normal curve, probability, relative frequency, subjective probability, expected value, population, sample, nonprobability sample, probability sample, simple random sample, sampling error, nonsampling error, stratified sample, cluster sample, parameter, statistic, confidence interval, sampling distribution, statistical significance, significance tests, null hypothesis, Type I and Type II errors, t-tests

Thurs. Oct. 11: Probability: Levin & Fox, chap. 5 & pp. 427-431 (Normal Curve)

Tues. Oct. 16: Sampling: Levin & Fox, pp. 158-163

Thurs. Oct. 18: Samples: Levin & Fox, pp. 163-194

Tues. Oct. 23: Significance Testing: Levin & Fox, chap. 7

Activities: Write short paper reporting on computer analysis of political dataset. Also a homework assignment involving probability and sampling.

MIDTERM: Thursday Oct. 25

Crosstabulations

Key concepts: crosstabulations, measures of association, chi square

- Tues. Oct. 30: Crosstabulations: Levin & Fox, pp. 47-53 & chap. 12
Thurs. Nov. 1: Research Ethics: Dooley, chap. 2
Tues. Nov. 6: Chi-square: Levin & Fox, pp. 265-289

Activities: Data analysis on the computer. Also a homework assignment involving some hand calculations of relevant statistics.

Correlation and Regression

Key concepts: correlation, Pearson's r, regression, regression coefficients, control tables, spurious correlation, multiple regression

- Thurs. Nov. 8: Correlation: Levin & Fox, chap. 10
Tues. Nov. 13: Regression: Levin & Fox, chap. 11
Thurs. Nov. 15: Control Tables: Weisberg, Krosnick, & Bowen, chap. 13

Activities: Use computer to construct cross-tabulations, draw scattergrams, and compute correlations and regressions. Also a homework assignment involving some hand calculations of relevant statistics.

Research Approaches

Key concepts: survey research, random-digit-dialing, response rate, open-ended question, closed-ended question, ethics of surveys, experimental controls, internal validity, external validity, random assignment, panel study, time-series study, quasi-experiment, ethics of experiments, content analysis, participant observation, nonreactive measures, ethics of observation

- Tues. Nov. 20: Survey Research: Baker, chap. 7
Thurs. Nov. 22: Thanksgiving Holiday
Tues. Nov. 27: Experiments: Frankfort-Nachmias & Nachmias, chap. 5
Tues. Nov. 27: Unobtrusive Research: Babbie, chap. 12
Thurs. Nov. 29: Review: Levin & Fox, p. 397

ANALYSIS PAPER DUE: Nov. 29