

PS 0700 – Research Methods in Political Science

(Fall 2012)

Class Instructor: Dr. George Krause

Office (Phone): 4442 Posvar Hall (648–7278)

Class: Tuesday & Thursday: 3:00pm – 3:50pm
1700 Posvar Hall

E-mail address: gkrause@pitt.edu

Website: <http://www.pitt.edu/~gkrause/>

Office Hours: Tuesday: 4:00pm – 5:00pm
& Thursday or
by Appointment

Recitation Instructors: Yu Xiao (yuxiaopitt@gmail.com)
Ignacio Arana (iga3@pitt.edu)

This course serves as an introduction to epistemological and research design issues confronted by political scientists. Although attention will be given to normative political science, the course's primary focus will be on social scientific inquiry from a "positivist" perspective commonly used by political scientists to examine contemporary, historical, and theoretical issues. This course will be taught in a mixed lecture/discussion format. Students are encouraged (and expected) to participate in class. The course material attempts to orient students to the social scientific enterprise. This will enable students to become competent consumers of social science information that one encounters in academic journals and books, magazines, newspapers, and other media outlets. Moreover, each student's ability to conduct research and term papers in other social science courses will be enhanced. On a more fundamental level, this course is intended to strengthen each student's ability to analyze, interpret, and critically assess real-world phenomena. There are no prerequisites for this course, save for a willingness to think in analytical terms.

The first part of the course deals with thematic issues relating to the scientific study of politics, including the application of various rational choice approaches commonly used within the political science discipline. The second portion of the course examines the primary components of the scientific method: theories, models, concept formation, hypotheses, variables, and measurement. The third and final segment of the course focuses on research design, sampling, and elementary descriptive data analysis and interpretation of inferential (statistical) results (primarily focusing on regression analysis).

Student performance will be evaluated by three non-cumulative examinations (two mid-terms and one final) consisting of one or more of the following question formats: multiple choice, true/false, matching questions, and open-ended problem solving. These exams will consist of material covered in both the assigned readings and/or classroom lectures/discussions. *The grading scale for each exam and the final grades based upon all three exam scores will be based upon the instructor's judgment.* The weights assigned to these three exams are as follows:

Highest Exam Score: 45% of Total Grade

Middle Exam Score: 30% of Total Grade

Lowest Exam Score: 25% of Total Grade

Make-up exams will be granted only under rare circumstances on a case-by-case basis deemed solely by the instructor. Students are required to provide at least 24 hours notice prior to the exam in question with a formal excuse that can be verified by the instructor to be considered for the possibility of receiving a make-up exam. *The instructor reserves the right to decline any make-up exam request – even when students follow the guidelines described above.* It is required that students will adhere to the university policies relating to academic integrity. University policies and procedures regarding academic integrity can be found at <http://www.pitt.edu/~provost/ai1.html> Every reasonable effort will be made to assist students in need of special accommodations due to disabilities. Students requiring special accommodations for disabilities must contact both the instructor and Office of Disability Resources and Services, 216 William Pitt Union, (412) 648-7890 / (412) 383-7355 (TTY) within two weeks from the start of the semester. It is the responsibility of students possessing learning disabilities to discuss this issue with the instructor during the first week of the course so that appropriate arrangements can be made as early as possible.

Students are **strongly encouraged** to come see me if they have any questions regarding the material covered in class sessions and/or the assigned readings. In order to help you as much as I possibly can, I ask that you come to my office prepared with specific questions to ask me. From my experience in teaching this course, I have seen some students test scores rise considerably by contacting me with **specific** questions regarding material that they were not completely confident about.

REQUIRED TEXTS

Johnson, Janet Buttolph and H.T. Reynolds. 2011. *Political Science Research Methods*. Seventh edition. Washington, D.C: Congressional Quarterly Press.

Kellstedt, Paul M., and Guy D. Whitten. 2009. *The Fundamentals of Political Science Research*. New York: Cambridge University Press.

In addition, I will draw material from other textbook sources and homemade lecture notes which will be presented during class sessions. In addition, journal articles noted in the syllabus (denoted in **boldface** print) are also required reading and can be downloaded via the World Wide Web at the J-STOR website: <http://www.jstor.org/>

CLASS SESSION OUTLINE

(Timing and Tempo May Vary Throughout the Semester at the Instructor's Discretion)

UNIT 1: Scope & Theoretical Inquiry

Week 1 (August 28)

THE SCOPE OF POLITICAL SCIENCE - AN OVERVIEW & INTRODUCTION

- Instructor Notes
- Johnson and Reynolds: Chapter 1
- Kellstedt and Whitten: Chapter 1

Partial List of General Concepts and Issues: scientific analysis, normative analysis, research puzzles/questions, positive analysis, theory, causality versus correlation; models, hypotheses; empirical testing; empirical evidence; and research implications.

Weeks 2 & 3 (September 4 & 11)

THE SCIENTIFIC STUDY OF POLITICS AND GOVERNMENT

- Instructor Notes
- Johnson and Reynolds: Chapter 2
- Kellstedt and Whitten: Chapter 2

Partial List of General Concepts and Issues: normative theory versus positive theory, explanation, causation (causal mechanism), theoretical logic, verbal models versus analytical models, first principles, theoretical propositions, empirical implications/hypotheses, falsifiability, empirical verification, aggregation & variation; and scientific knowledge; characteristics of sound theory.

NOTE: NO CLASS ON THURSDAY SEPTEMBER 13

Weeks 4 – 6 (Weeks of September 18 – October 2)

RATIONAL CHOICE APPROACHES TO THE STUDY OF POLITICS

* Overview: Comparing and Contrasting Traditional, Behavioral, and Post-Behavioral Approaches; Rational Choice Theory as a Paradigm of Politics (Pros and Cons)

[Required Reading: **Gary J. Miller. 1997. “The Impact of Economics on Contemporary Political Science.” Journal of Economic Literature 35(September): 1173–1204]**

* Decision Theory, I: Expected Payoff from Choice of Law School Program

* Decision Theory, II: Median Voter Theorem

* Principal-Agent Theory: Terminology, Logic, and Applications

[Required Reading: **Terry M. Moe. 1984. “The New Economics of Organization.” American Journal of Political Science 28(November) 739–777)**

* Transactions Costs Theory: Terminology, Logic, and Applications

* Game Theory: Basic Concepts and Applications

Partial List of General Concepts and Issues: traditional political science, behavioralism, and post-behavioralism, institutional analysis, legal analysis, rational choice theory, cost-benefit analysis, decision theory, expected payoffs from two choices, median voter theorem, principal(s), agent(s), moral hazard, adverse selection, information asymmetry, monitoring, political control, transactions costs, zero-sum game, positive sum-game, negative-sum game, Nash equilibrium.

**FIRST MIDTERM EXAMINATION
(Approximate Date: Thursday October 4, 2012)**

**NO CLASS – TUESDAY OCTOBER 9
(FALL BREAK RECESS)**

UNIT 2: Empirical Inquiry

Weeks 7 – 9 (Weeks of October 9 – October 23)

THE ANALYTICAL TOOLS OF EMPIRICAL POLITICAL INQUIRY

CONCEPT FORMATION & VARIABLES; HYPOTHESES; AND MEASUREMENT

- Instructor Notes
- Johnson and Reynolds: Chapters 3 & 4
- Kellstedt and Whitten: Chapter 5

Partial List of General Concepts and Issues: concepts, hypotheses, means to test hypotheses, variables, unit of analysis, tautology, theories, models, levels of measurement, operationalization, fact, truth, falsifiable statements, relational analysis, relationships among variables, paradigms, axioms, laws, inductive logic, deductive logic, validity, reliability, generalizations, and arrow diagrams.

Weeks 10 & 11 (Weeks of October 30 & November 6)

RESEARCH DESIGN & EMPIRICAL OBSERVATIONS

- Instructor Notes
- Johnson and Reynolds: Chapters 5, 7, & 8
- Kellstedt and Whitten: Chapter 4

Partial List of General Concepts and Issues: research design, case study design, panel study design, time series design, cross-sectional design, experimental design, post-test, pre-test, selection, statistical regression, nonexperimental design, interaction effect, internal validity, instrument decay, field experiments, external validity, extraneous factors, control group, experimental group, experimentation, experimental effect, population, sample, various types of samples, confidence interval, element, margin of error, population parameter, random numbers table, random digit dialing, sample bias, sampling error, sampling statistic, sampling frame, sampling fraction, sampling unit, sampling interval, stratum, weighting factor, stratification, randomization; various forms of observation, accretion measures, erosion measures, and field study.

SECOND MIDTERM EXAMINATION **(Approximate Date: Thursday November 13, 2012)**

UNIT 3: Basic Statistics

Week 12 & 13 (Weeks of November 15 & 22)

STATISTICS, I: DESCRIPTIVE & INFERENCE ANALYSIS OF QUANTITATIVE DATA

- Instructor Notes
- Johnson and Reynolds: Chapters 9 & 10
- Kellstedt and Whitten: Chapters 6, 7, & 8

Partial List of General Concepts and Issues: samples versus populations; frequency distributions, measures of central tendency (mean, median, and mode), Central Limit Theorem; measures of dispersion (range, variance, standard deviation), the normal distribution, and z-scores.

**NO CLASS – THURSDAY NOVEMBER 22 & FRIDAY NOVEMBER 23
(UNIVERSITY THANKSGIVING RECESS)**

Weeks 13 & 14 (Weeks of November 29 & December 6)

STATISTICS, II: INTERPRETING REGRESSION MODELS

- Instructor Notes
- Johnson and Reynolds: Chapters 12 & 13
- Kellstedt and Whitten: Chapters 9, 10, 11, & 12

Partial List of General Concepts and Issues: *interpreting regression equations:* parameter estimates/ regression coefficients, standard errors, t-statistics, probability values, statistical significance, R^2 , adjusted R^2 .

LAST DAY OF CLASS: THURSDAY DECEMBER 7, 2012

FINAL EXAMINATION (Unit 3 Material):

SATURDAY DECEMBER 15, 2012 [12:00pm – 1:50pm]