INTRODUCTION TO POLITICAL SCIENCE METHODS

790:300:02
Spring 2014, M/W 7:15-8:35 in CDL 102

Mona S. Kleinberg
Department of Political Science
Rutgers University, New Brunswick, NJ
Office Hours: M/W 4pm-5pm and by appointment HH 408
e: mkleinb@rci.rutgers.edu

1. Course Description and Learning Objectives

Introduction to Political Science Methods is central to the appreciation and critique of political science research conducted in American Politics (public opinion, race and politics, political psychology, voting behavior, elections, institutions, gender, etc). The skills acquired easily extend to research in Comparative Politics, International Relations, and other political science subfields.

This class is designed to provide fundamental quantitative reasoning and applied research skills. After taking this course, students will both understand and know how to conduct basic research in political science using survey, experimental, and other empirical data. Moreover, students will comprehend the basic building blocks of political science inquiry, and know how to do a literature review, to formulate and test a research hypothesis of their own, and to perform data analysis using a widely-known statistics program.

Lastly, students become more “employable” as a by-product of taking this course. Understanding data collection methods and being able to conduct basic data analysis using SPSS are skills that translate readily to work conducted in the “real world.” Jobs in politics, marketing, public relations, business, etc. often require analytical skills like the ones taught in this course. In addition to preparing students for jobs, this class also provides the skills and research experience necessary to take more advanced quantitative reasoning courses, to conduct further research, or apply to graduate school.

2. Requirements

Students will encounter some math in this course, but there is no prerequisite. Students are also required to use SPSS (or Stata) to do basic statistical analysis. SPSS is available in most labs (under class software in PC mode). All students must therefore have access to RU computing resources [http://www.nbcs.rutgers.edu/ccf/main/schedules/].

Data: I will provide the class with a version of the 2012 American National Election Study (ANES) data [http://www.electionstudies.org].

2.2. Sakai. Additional readings are available via the course site on Sakai. Students are expected to have completed the required textbook and any supplemental readings before class. Supplemental readings are not noted on the syllabus and will be announced via sakai and assigned as needed.

2.3. Technology. Computers and Calculators: Students must use a scientific calculator during quizzes, exams, problem sets, etc. Bring the calculator every class. For reasons that are obvious, students may not use your phone, tablet, or computer during the exams in lieu of a calculator. Students may not share calculators either. Laptops are welcome in class, unless they are used for entertainment purposes. I reserve the right to prohibit personal computer use if I think the class will benefit.

3. Course Grade Distribution

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>15%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>20%</td>
</tr>
<tr>
<td>Final Project</td>
<td>20%</td>
</tr>
<tr>
<td>4 Problem Sets</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance/Participation*</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Attendance 40%; Quizzes 20%; Study Participation 40%

4. Attendance and Preparedness

Regular attendance during the course is expected and students are asked to participate meaningfully in class. I call on students by name to check if you are present and if you have done the readings. This means you must show up on time and stay for the entire class. I do not take attendance every class, but I will take a “random sample” to estimate overall attendance. If students are absent, I deduct points. All students will start the semester with 10 points “assumed perfect attendance. Each time the student misses an attendance check, 2 points will be deducted. I also reserve the right to hold short unannounced quizzes as a way to gage attendance and comprehension. Unannounced quizzes are part of your attendance grade.

4.1. Absence Reporting. If you will miss a class, you must use the University absence reporting website at [https://sims.rutgers.edu/ssra/](https://sims.rutgers.edu/ssra/) to indicate the date and reason for your absence. This system generates an automatic email notifying me of your absence. Extended absences will compromise your ability to succeed in this course; should you encounter an emergency or situation that you believe will hamper your ability to complete the course requirements, speak to the Dean of Students as soon as possible, do NOT wait until the end of the semester, or when assignments or grades are due.

4.2. Make-up Policy. If you are absent for the quiz, midterm, or one of the days the problem sets are due, I will allow for a makeup during office hours \( \iff \) (if, and only if) (A) the absence is reported in a timely fashion (before class and before the assignment due date) and (B) you can document the reason for your absence showing that it was beyond your control. I require a note from a doctor, judge, etc, if you are sick or were in court. If your car broke down, someone in your family needed you to take them to the ER, a sudden death in the family, and similar unfortunate scenarios also all require proof. If you foresee having to be absent, talk to me at the beginning of the semester.
5. **Assessment**

5.1. **Research Participation.** All students have the opportunity to take part in a political science research study. The study is a panel study and will be conducted once a week (except spring break) starting February 10. The experiment will take a total of about 90 minutes, but will run over several weeks of the semester in small time chunks of 5 minutes each. Only the the first and last week will be longer (30 minutes). **You cannot miss any portion of the experiment because missing one week will render your data useless. You will not receive credit if you miss any part of the study.** You will participate via the Web on a set day of your choosing.

If you do not wish to participate in the experiment, you may write a 15-page paper on the origins and causal logic of political science experiments. See me at the beginning of the semester and let me know if you prefer to write a paper instead of gaining research experience.

5.2. **Examinations:** There are two exams. There is one midterm, and one final exam. Exams include all material from lectures, the textbooks (including information in the text that has not been discussed during lecture), and work done in the computer lab (using SPSS). The course is designed to build upon previous material; therefore the second midterm, and final exam are cumulative. You will need to bring a scientific calculator.

5.3. **Problem Sets.** Completed by hand, in SPSS, or on Sakai, depending on the assignment. There are four short problem sets. Problem sets give students an opportunity to sharpen their math skills and ensure that students are working towards a successful final project. Problem sets are due one week after they are assigned. Students must turn in a **hard copy** (no emails). Late problem sets are zero points.

5.4. **Final Project.** The final project of the course consists of a research design. This design should be 8-10 pages in length and contain the following: literature review, hypotheses, methods, and results. The paper features the results from rudimentary data analysis performed by the student. We will go over the requirements for the paper in class and some of the problem sets will provide students the opportunity to begin work on the final project early in the semester. Final projects must be turned in via the Assignments tab on the Sakai website. Final projects must be in MS Word, L\LaTeX, or PDF. No other formats are accepted.

6. **Academic Integrity**

I strictly enforce academic integrity as determined by Rutgers University. A copy of these regulations is available through the University’s website, at: [http://ruweb.rutgers.edu/regulations/book4/427.pdf](http://ruweb.rutgers.edu/regulations/book4/427.pdf); ignorance of these policies is not an excuse for violations. Violations of academic integrity are a serious matter, and I pursue the strictest punitive action in the case of a violation. Serious cases of academic dishonesty include, but are not limited to:

- Using and/or submitting as one’s own a paper/project that was written by another student in the past
- Using and/or submitting as one’s own a paper/project that was obtained through the Internet, or some other source
- Having someone else write (even partially) or help with the writing of any of the required papers
- Having someone else do any of the computer work required for the project
• Engaging in plagiarism: using any statements (either in a verbatim or paraphrased form) found in other people’s work as one’s own, and without proper citations
• Cheating on an exam
• Asking a friend to pretend to be you when I call your name to check if you are present

7. Course Outline

All readings are on Sakai or in the textbook — Unless noted otherwise.

Introduction

Wed 1/22 — Course Overview, Syllabus, and Introduction to The Philosophy of Science


Mo 1/27 — The Philosophy of Science, continued

(1) Karl Popper, The Logic of Scientific Discovery (1934), Ch.1 “A Survey of Some Fundamental Problems.”

(2) Optional: http://plato.stanford.edu/entries/pseudo-science/

Wed 1/29 — Studying Politics & Intro to Data Collection


(2) Janet B. Johnson and H.T. Reynolds, Political Science Research Methods (2012), Ch. 8 “Making Empirical Observations.”

Mo 2/3 — Building Blocks of Political Science Research & Intro to SPSS in class: Data Management; Variables


Wed 2/5 — Measuring and Describing Variables/Central Tendency & Dispersion (SPSS Demonstration: Mean, Median, and Mode)

(1) Philip H. Pollock, The Essentials of Political Analysis (2012), Ch.2 “Measuring and Describing Variables.”

(2) Janet B. Johnson and H.T. Reynolds, Political Science Research Methods (2012), Ch.11 “Making Sense of Data.”
Mo 2/10 — Hypotheses and Explanations (SPSS Demonstration: Basic Comparisons between Groups) PANEL STUDY BEGINS


Wed 2/12 — Basic Math for Political Science Research

(1) Steven P. Schacht and Jeffrey E. Aspelmeier, *Social and Behavioral Statistics* (2005), Ch.2 “Basic Mathematical Concepts”


*Problem Set #1 assigned; Due next week*

**Common Research Methods in American Politics**

Mo 2/17 — Content Analysis


Wed 2/19 — Sampling

(1) Janet B. Johnson and H.T. Reynolds, *Political Science Research Methods* (2012), Ch. 7 “Sampling.”

(2) Philip H. Pollock, *The Essentials of Political Analysis* (2012), Ch. 6 “Foundations of Statistical Inference”


*Problem Set #1 Due at start of class*

Mo 2/24 — Surveys: Intro to the ANES (SPSS Demonstration: Using ANES data)

(1) Janet B. Johnson and H.T. Reynolds, *Political Science Research Methods*, Ch.10 “Survey Research and Interviewing”

Wed 2/26 — Experiments


Statistical Inference

Mo 3/3 — Distributions, Normal Curve, Z-Scores (SPSS Demonstration: Graphic displays of data)

(1) Steven P. Schacht and Jeffrey E. Aspelmeier. *Social and Behavioral Statistics* (2005), Ch.5,6 “Measures of Variability” and “Locating Points within a Distribution”

(2) Chris Spatz, *Tales of Two Distributions* (2011), Ch.5 “Other Descriptive Statistics

*Problem Set #2 Assigned*

Wed 3/5 — Significance


Mo 3/10 — Correlation and Regression (SPSS Demonstration: Bivariate Regression)


(2) Chris Spatz, *Tales of Two Distributions* (2011) Ch. 6 “Correlation and Regression”

*Problem Set #2 Due*

Wed 3/12 — EXAM #1

Spring Break

Mo 3/24 — Hypothesis Testing, Two Sample Designs


(2) Make appointment with librarian — bring a friend

(3) Identify a possible research topic for your final paper

Wed 3/26 — No Class (I am at the “Making Electoral Democracy Work” conference in Canada [http://electoraldemocracy.com](http://electoraldemocracy.com)) In lieu of class, please read and complete the following:


(3) Use class time to meet with a Rutgers librarian.
   - Make an appointment to learn how to use indexes and databases to search for peer-reviewed articles.
   - Begin work on literature review/research design.
   - *Bibliography due in class Mo 3/31. Counts like quiz.*
Mo 3/31 — Analysis of Variance (ANOVA): Bring Bibliography

(1) Chris Spatz, *Tales of Two Distributions* (2011), Ch. 11,12 “Analysis of Variance: One-Way Classification” and “Analysis of Variance: One-Factor Repeated Measures”

*Problem Set #3 Assigned*

Wed 4/2 — Analysis of Variance (ANOVA), continued. (SPSS Demonstration: ANOVA)

(1) Chris Spatz, *Tales of Two Distributions* (2011) Ch.12 (read again) and Ch.13 “Analysis of Variance: Factorial Design”


Mo 4/7 — Chi-Square Tests (SPSS Demonstration: Chi-Square Test)

(1) Chris Spatz, *Tales of Two Distributions* (2011), Ch.13 “Chi Square Test”

*Problem Set #3 Due; Continue work on literature review/research design*

Wed 4/9 — Catch up/review class with a focus on SPSS

(1) Reading TBA

*Problem Set #4 Assigned (Research Question, Hypothesis, Research design; One paragraph)*

**Applied Statistics: Using SPSS**

Mo 4/14 — SPSS Help

(1) Meet in computer LAB Group A (Location TBA)

Wed 4/16 — SPSS Help

(1) Meet in computer LAB Group B (Location TBA)

*Problem Set #4 Due on Sakai at 5pm (BOTH Groups)*

Mo 4/21 — Multiple Regression in SPSS (Problem Set#4 returned with comments)

(1) Briefly review: Philip H. Pollock, *The Essentials of Political Analysis* (2012), Ch. 4: Research Design and the Logic of Control

(2) Philip H. Pollock, *The Essentials of Political Analysis* (2012), Ch. 8: Correlation and Linear Regression

Wed 4/23 — Paper Workshop in Class:

(1) Due in hardcopy today: Literature review (5 pgs), Revised research question, hypothesis, and method

(2) Exchange with partner (Group A/B). “Grade” each other’s work and provide thoughtful feedback

(3) Turn in with comments at the end of class; Comments count like quiz
Mo 4/28 — SPSS Help
   (1) Meet in computer LAB Group B (location TBA)

Wed 4/30 — SPSS Help
   (1) Meet in computer LAB Group A (location TBA)

**FINAL PROJECTS due** Sunday 5/4 at 11:55pm on Sakai

Mo 5/5 — Review Class for final

**FINAL EXAM**
   See Rutgers final exam schedule for date and time
HOW TO USE THE RU LIBRARY SYSTEM TO RETRIEVE PEER-REVIEWED JOURNAL ARTICLES

MONA. S. KLEINBERG

1. Searching for a specific article

There are multiple ways to retrieve a peer-reviewed article via the Rutgers University Library. If you know the name of the academic journal, the authors, and (or) the title, you can simply go the library home page and enter the information into the search. The search form is prominently featured:

You have the option to search for articles or journals, as well as books, audio/visual material like DVDs, or course reserves. To locate a specific article, you would use the journals tab. Voila!

Date: Quick Draft: January 2014.
2. Doing research for a literature review

If you are doing research, you should utilize Databases and Indexes. Rutgers pays a lot to give you access to repositories like Jstor (Journal Storage), and other online resources. Jstor is a digital library of academic journals, books, and other primary sources. In order to do academic research, you must have access to other scholars’ work first, to see what they have found, so you can base your research questions and predictions on already established findings.

To access the Databases and Indexes, you start at the RU libraries homepage: [http://www.libraries.rutgers.edu](http://www.libraries.rutgers.edu). Next, locate “Find” on the top menu bar (in the left hand corner). click on “Find” and select “Indexes & Databases (either from the drop down menu, or the page “Find” takes you to: [http://www.libraries.rutgers.edu.proxy.libraries.rutgers.edu/find](http://www.libraries.rutgers.edu.proxy.libraries.rutgers.edu/find)).

On the “Indexes and Databases” page, have a look at the FAQs — they answer many basic questions — Then select your subject area (e.g. Social Sciences if you are taking a
Political Science Class). Depending on your research project, you might also want to use “Communications” or “Psychology” databases. For now, click on “Political Science.”

This takes you to the core and supplementary digital libraries germane to political science. You can start by using “Google Scholar” (under supplementary). But, do not limit your search to google scholar. Google scholar is decent, but it is not comprehensive. When you are doing academic research, you have to strive for being inclusive. Otherwise, you might pose a question someone has recently solved. Try searching in “Google Scholar” using keywords related to your research topic, vary them depending on the results you get. Searching is a bit like cooking. You have to practice a bit till you get the right recipe together to deliver exactly what you want. In other words, allow your search to take time.
Google will take you to other repositories like Jstor.

Download and save a PDF of the article for your literature review. Hint: Take a look at who cites this article. That helps is finding more related research.