

# PSCI 3105: Designing Social Inquiry

Fall 2018

**Instructor:** Dr. Megan Roosevelt

**Email:** [megan.roosevelt@colorado.edu](mailto:megan.roosevelt@colorado.edu)

**Location:** Humanities 1B80

**Time:** MWF 11:00 – 11:50am

**Office:** Ketchum 122

**Office Hours:** W 1:00 – 3:00pm  
or by appointment

**Course Overview/Objectives:** “Normal science,” as characterized by philosopher of science Thomas S. Kuhn, is at its core a puzzle-solving enterprise consisting of theory development and gathering evidence, progressively accumulating detail within an established broader paradigm<sup>1</sup>. The academic study of political science proceeds in this manner, and in American universities, is typically dominated by the statistical analysis of quantitative data. This class is intended as a guide to conducting original political science research at the undergraduate level; the class will cover research question formulation, theory building, measuring concepts, and various approaches to empirical testing and analysis. By the end of the course, students will be prepared to develop research questions and theoretical arguments, to execute and critique methodologically rigorous scientific tests of such arguments, and will apply these skills to present their own original research.

## Required Text:

- Kellstedt, Paul M., and Guy D. Whitten. *The Fundamentals of Political Science Research* (3<sup>rd</sup> edition preferred): Cambridge University Press.
- All other assigned readings will be available online through D2L.

**Required Software:** Students will clean and manipulate datasets using their choice of the two most popular statistical software packages in political science: Stata or Rstudio. You must have access to one or both of these softwares, preferably on your personal computer, by Week 6 if not earlier. We will discuss these software packages in Week 2, so do not worry about having software installed at the beginning of the semester. You should also have Microsoft Excel installed on your computer: you can download Microsoft Office for free through the university through the OIT website (<https://oit.colorado.edu/software-hardware/software-downloads-and-licensing>). Finally, assignments and the final paper will need to be submitted in .doc, .docx, or .pdf format (note, *not* in .pages), and the presentation should be produced in .ppt or .pdf format – these will also require the Microsoft Office software and/or Adobe.

## Grading Policy:

Attendance	10%
Assignments	35% (7 @ 5% apiece)
Presentation	25%
<u>Final paper</u>	30%
Total	100%

For converting final percentages into letter grades, A: 94-100, A-: 90-93, B+: 86-89, B: 83-85, B-: 80-82, C+: 77-79, C: 73-76, C-: 70-72, D+: 67-69, D: 63-66, D-: 60-62, F: <60.

For grade disputes, please wait to contact me for 24 hours after I pass back a graded assignment; use this time to articulate why you think your work merits a different grade. After 24 hours have passed, you may email me

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<sup>1</sup> In *The Structure of Scientific Revolutions* (1962).

to set an appointment to discuss the grade. While you are encouraged to drop by office hours to discuss class materials or personal concerns, you should not expect to walk into office hours to challenge a grade without emailing me about the grade dispute first. Please discuss grades within one week of receiving them; I will not change grades on assignments if you come to me at the end of the semester.

### **Graded items and assignments:**

**Attendance:** Students will sign next to their name on daily attendance sheets which will circulate at the beginning of each class. Attendance makes up 10 percent of the overall grade. Students are allowed four missed classes with no questions asked; beyond that, each missed day will deduct one percentage point from your attendance grade (i.e. once you miss 14 days of class, you will have an attendance grade of 0). The three free days are intended to encompass all absences, “excused” or otherwise. If you miss a day due to illness or unforeseen circumstances, feel free to drop by my office hours or talk about it if you wish, but I do not require (or want) documentation to attempt to excuse the absence.

**Assignments:** There will be seven assignments due throughout the semester, with due dates indicated on the syllabus. Some will be partially or entirely completed during class periods, but most will be done outside the classroom. Students should upload these to the appropriate assignment folder on D2L by midnight on the day indicated on the syllabus (e.g. Assignment 2 should be uploaded before 12:01am Thursday, 9/20). These will be automatically run through an originality checking software, so be sure to do your own work and cite where appropriate (we will discuss protocol here before assignments are due).

**Presentation:** In Week 15, students will give approximately 5-minute presentations of the research design they have developed throughout the semester, covering research question and motivation, theory and hypotheses, and preliminary empirical test results. We will end each day of presentations with a short period devoted to Q&A or constructive feedback, which students may incorporate into their final papers. I will also give students written notes on their projects following their presentations designed to strengthen the final paper due in Week 16. I will provide a rubric on D2L, but students can expect to be evaluated for this portion of the grade based on three components: the content of their presentation, their delivery of this content, and their engagement with fellow students during the Q&A sections.

**Final Paper:** The final paper, due in both electronic and hard copy on the last day of class (Wednesday, 12/12), will be a 10-15 page original research paper that is a culmination of several assignments completed throughout the semester. Like the assignments, the electronic copy of the paper should be uploaded to the appropriate folder on D2L, which will run it through a plagiarism detection software. Extensive guidelines on both the paper itself and proper rules for citation of academic work will be posted closer to the due date. All papers should be original work, not previously or simultaneously submitted for credit in another course without my prior approval.

**Late work policy:** For each day an assignment is late, it will be assessed a one-letter-grade penalty: if an assignment due by midnight on a Friday would have earned an 88 but is submitted by midnight on Saturday, it will receive a 78, a 68 if received on Sunday, etc. Students will sign up a week in advance for their Week 15 presentation slots; if you know in advance that you will have to miss yours, let me know as soon as possible to reach an alternate arrangement.

## **Class Schedule:**

\*subject to change based on the pace at which we cover material

### **Week 1: Introduction**

- Monday, 8/27: Syllabus overview
- Wednesday, 8/29: Studying political science
  - Reading: “Fudging hell: Are results in top journals to be trusted?” *The Economist*, January 21, 2016. Available on D2L.
- Friday, 8/31: **no class – APSA annual meeting**

### **Week 2: Working with quantitative data**

- Monday, 9/3: **no class – Labor Day**
- Wednesday, 9/5: Observations, variables, and datasets
  - Reading: *Fundamentals of Political Science Research (FPSR)* chapter 1
- Friday, 9/7: Getting started with statistical softwares

### **Week 3: Coming up with a research project**

- Monday, 9/10: Levels of analysis
  - In class: Assignment 1
- Wednesday, 9/12: Strategies to develop a research question
  - Reading: *FPSR* chapter 2
- Friday, 9/14: Theory building

### **Week 4: Correlation vs. causation**

- Monday, 9/17: What’s the difference – why does it matter?
  - Reading: *FPSR* chapter 3
- Wednesday, 9/19: Establishing causality
  - Assignment 2 due
- Friday, 9/21: **no class – MR out of town**

### **Week 5: Introduction to probability theory**

- Monday, 9/24: Central limit theorem and the law of large numbers
  - Reading: *FPSR* chapter 7
- Wednesday, 9/26: Sample statistics vs. population parameters
- Friday, 9/28: Internal and external validity

### **Week 6: Measuring concepts and operationalizing variables**

- Monday, 10/1: Quantifying theoretical concepts with observable data
  - Reading: *FPSR* chapter 6
- Wednesday, 10/3: Bias, efficiency, and consistency
  - Reading: *FPSR* chapter 5
- Friday, 10/5: Descriptive statistics
  - In class: Assignment 3

### **Week 7: Bivariate hypothesis testing**

- Monday, 10/8: Forming directional hypotheses in reference to the null hypothesis
  - Reading: *FPSR* chapter 8
- Wednesday, 10/10: The logic of  $p$ -values
- Friday, 10/12: Options for bivariate hypothesis tests

### **Week 8: Bivariate linear regressions**

- Monday, 10/15: Assumptions of OLS regression
  - Reading: *FPSR* chapter 9
- Wednesday, 10/17: Running and interpreting bivariate regressions
- Friday, 10/19: Assessing model fit
  - Assignment 4 due

### **Week 9: Multiple regression**

- Monday, 10/22: Identifying relevant control variables
  - Reading: *FPSR* chapter 10
- Wednesday, 10/24: Running and interpreting multiple regressions
- Friday, 10/26: Statistical vs. substantive significance
  - Assignment 5 due

### **Week 10: Presenting results**

- Monday, 10/29: Words vs. pictures
  - Reading: Kastellec, Jonathan P., and Eduardo L. Leoni. 2007. "Using graphs instead of tables in political science." *Perspectives on Politics* 5(4): 755-771.
- Wednesday, 10/31: Building meaningful graphics
  - Reading: Wickham, Hadley. 2010. "A layered grammar of graphics." *Journal of Computational and Graphical Statistics* 19(1): 3-28.
- Friday, 11/2: Fun with visual presentations of data
  - Assignment 6 due

### **Week 11: Model specification**

- Monday, 11/5: Alternate specifications and robustness checks
  - Reading: *FPSR* chapter 11
- Wednesday, 11/7: Diagnostic tests
- Friday, 11/9: Constructing and interpreting interactive terms
  - Assignment 7 due

### **Week 12: Logistic regression and time series data**

- Monday, 11/12: Alternate dependent variable structures
  - Reading: *FPSR* chapter 12
- Wednesday, 11/14: Running and interpreting logistic regressions
- Friday, 11/16: Time series/panel data and lagged DVs

### **Week 13**

- \*\*\*\*no class – Fall Break\*\*\*\*

#### **Week 14: Qualitative approaches to political science**

- Monday, 11/26: Case study selection and implementation
  - Reading: Geddes, Barbara. 1990. "How the cases you choose affect the answers you get: Selection bias in comparative politics." *Political Analysis* 2: 131-150. Available on D2L.
- Wednesday, 11/28: Process tracing
  - Reading: Ricks, Jacob, and Amy H. Liu. 2018. "Process-tracing research designs: A practical guide." *PS: Political Science and Politics*, 1-5. Available on D2L.
- Friday, 11/30: field research and natural experiments
  - Reading: Excerpts from Putnam, Robert D., Robert Leonardi, and Rafaella Y. Nanetti. 1994. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University press: Princeton, NJ., and Posner, Daniel N. 2004. "The political salience of cultural difference: Why Chewas and Tumbukas are allies in Zambia and adversaries in Malawi." *American Political Science Review* 98(4): 529-545. Available on D2L (separate files).

#### **Week 15: Research presentations**

#### **Week 16: Wrapping up**

- Monday, 12/10: writing day
- Wednesday, 12/12: last day of class
  - Paper due in hard copy and on D2L

#### **University Policies:**

**Accommodation for Disabilities:** If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website.

**Classroom Behavior:** Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

**Honor Code:** All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course

instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code ([honor@colorado.edu](mailto:honor@colorado.edu)); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

**Sexual Misconduct, Discrimination, Harassment, and/or Related Retaliation:** The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (including sexual assault, exploitation, harassment, dating or domestic violence, and stalking), discrimination, and harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

**Religious Holidays:** Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. If this applies to you, please let me know at the start of the semester.