

POLS UN3720: Scope and Methods

Tuesday-Thursday, 4.10 – 5.25 pm
Location: 301 Uris Hall

Professor: Caterina Chiopris
Email: cc5398@columbia.edu

Office hours: Thursday, 5.45 -6.45 pm
Sign up [here]

Teaching Assistants

Sirine Kadi, ssk2276@columbia.edu
Isabella Marin Quintero, im2690@columbia.edu
Konstantinos Niakaros, kn2678@columbia.edu
Sally Son, es3669@columbia.edu

Description of the Course¹

This class introduces students to a variety of statistical methods used to investigate political phenomena. We will address the principles behind these methods, their application, and their limitations. The course aims to provide anyone interested in political science with a proficient understanding of the intuitions behind several of the methods most commonly used to analyze political data and identify causal paths. By the end of the course, students will have acquired important analytical and practical skills and will be able to evaluate the quality and reliability of scholarly and journalistic work done using quantitative methods. Students will also learn basic statistical software skills (R).

Course Structure

The course has three components: a lecture on the methods, a lecture on relevant examples from the literature, and a section with a teaching assistant. The lectures will include instances of discussion and interactive activities and will be framed for collaborative learning. For this reason, we will often use a tool for anonymous and instantaneous polls to do quizzes or surveys on the class content. It is important that students participate actively. During the discussion of the examples from the literature, we will also talk about the general content of the articles, the details of the methods used, the reasons of the choices of these methods and the limitations of the articles' methods (both as described by the authors and by the students). In the section the students will learn how to use R, analyze data, and, when possible, learn to reproduce some of the most basic applications found in the examples.

¹ The syllabus and lecture notes are largely Chiara Superti's, to whom I am hugely indebted.

Course Requirements

The requirements in this class have multiple pedagogical goals. By the end of the course, you will have acquired important analytical skills and be able to proficiently evaluate scholarly and journalistic work done using quantitative methods. Finally, you will learn how to do some basic data analysis with R.

- a)* Participation: in-class discussion and polls, and section. This course has an interactive component, which makes the participation of each of you essential for the learning process.
- b)* Problem sets: the problem sets will cover different topics, will often have a coding (R) component as well as questions on the material and the examples discussed in class.
- c)* Quizzes: in-class biweekly quizzes will test your knowledge of the problem set materials and of the previous two weeks of class content. The worst quiz will be dropped. No exceptions will be given for missing a quiz.
- d)* Exams: in-class midterm and final exam.

Summary of grade distribution

Assignments	Proportion of final grade
Weekly participation	10%
Problem sets	20%
Quizzes	20%
Midterm exam	20%
Final exam	30%

Disabilities Accommodations

If you are a student with a disability and have a DS-certified ‘Accommodation Letter’ please come to my office hours to confirm your accommodation needs. If you believe that you might have a disability that requires accommodation, you should contact Disability Services at 212-854-2388 and disability@columbia.edu.

Collaboration policy

Please make sure that you only present your own work in any assignment you submit. Only in the coding component of the problem sets some collaboration will be allowed. However, please pay attention to the instructions of each problem set which clearly state which questions can be discussed with your peers and which cannot.

Academic Integrity

From the official Columbia University website page on academic integrity: “The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.

Scholarship, by its very nature, is an iterative process, with ideas and insights building one upon the other. Collaborative scholarship requires the study of other scholars' work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited.

In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.

For more information on academic integrity at Columbia, students may refer to the Columbia University Undergraduate Guide to Academic Integrity:
<http://www.college.columbia.edu/academics/academicintegrity>

Use of Generative AI

The problem sets are meant to be solved without the use of AI. Students who rely entirely on AI without understanding the coding tasks for the problem sets will not be able to pass the quizzes.

Late Penalties, Absence and Extensions:

Late penalties apply to the problem sets. Extensions will be granted ONLY in case of emergencies.

Participation to class and section is mandatory. Unjustified absences will affect your participation grade.

Readings

The following ***required books***:

Angrist, J. D., & Pischke, J. S. (2014). *Mastering metrics: The Path from Cause to Effect*. Princeton University Press (referred to as MM)

Wheelan, Charles. *Naked statistics: stripping the dread from the data*. WW Norton & Company, 2013.
(referred to as W)

All other readings are available online through Columbia library or on coursework.

Recommended

Any guide on the use of R.

Weekly Plan

Date (approx.)	Topic	Material	Tests	Assignment	Section
Jan 20	Intro: Social Sciences	King 2001*			
Jan 22	Descriptive Statistics	W Ch 2,3			No section
Jan 27	Inference	W Ch 4,8		PS1 posted	
Jan 29	Inference	W Ch 9,10			Intro to R
Feb 3	Experiments	MM Ch 1	Quiz 1		
Feb 5	Experiments	MM Ch 1			Inference, PS1rev
Feb 10	Experiments	Case studies			
Feb 12	Experiments	Case studies		PS1 due (W)	Experiments
Feb 17	Experiments	W Ch 11			
Feb 19	Regression	MM Ch 2	Quiz 2	PS2 posted	Regression
Feb 24	Regression	MM Ch 2			
Feb 26	Regression	Case studies			PS2 review
Mar 3	Regression	MM Ch 2		PS2 due	
Mar 5	Natural Experiments	Case Studies	Quiz 3		
Mar 10	Midterm Review				
Mar 12	In-class midterm		Midterm		No section
Mar 24	Instrumental Variables	MM Ch 3			
Mar 26	Instrumental Variables	MM Ch 3			IV
Mar 31	Instrumental Variables	MM Ch 3	Quiz 4	PS3 posted	
Apr 2	Regression Discontinuity	MM Ch 4			IV

Apr 7	Regression Discontinuity	MM Ch 4			
Apr 9	RD/DD	MM Ch 4/5		PS3 due	RD
Apr 14	Difference in Differences	MM Ch 5			
Apr 16	Difference in Differences	MM Ch 5	Quiz 5	PS4 posted	DiD
Apr 21	Text as data	JurafskyCh1-3			
Apr 23	Text as data	JurafskyCh4-5			Text
Apr 28	Text as data	JurafskyCh6-9		PS4 due	
Apr 30	Qualitative Methods	Comp Ethn***	Quiz 6		Review
May TBD			Final Exam		

* Chapter 1, King, Gary, Keohane, Robert O., and Verba, Sidney. (2001) *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton University Press, 2001

** Silver, N. (2012). *The Signal and the Noise*. New York: Penguin (chapter 2)

*** Simmons, Erica S., and Nicholas Rush Smith. "The case for comparative ethnography." *Comparative Politics* 51.3 (2019): 341-359.