

PS 230: Introduction to Political Research

Fall 2022

Instructor: Jaeseok Cho

Class Hours: M/W/F 11-11:50 am

Class Room: 331 Gregory Hall

Instructor E-mail: jcho52@illinois.edu

Office Hours: M/W 9:30-10:30 am and by appointment

Office: 316 Armory

Course Description

This course introduces students to quantitative political science research. Students will learn statistical knowledge and programming skills necessary for interpreting political phenomena and designing their own research. Over the semester, we will ask some questions related to the political arena. For instance, do certain economic policies reduce poverty in the United States? Does certain foreign policy reduce the chances of war between two countries? How can we predict the results of the next presidential election? These are examples of some questions we can explore over the semester. By the end of the semester, 1) students should be able to interpret the results of most current political science literature, and 2) students should be able to conduct their own research to answer research questions related to political science. Students are expected to finish class readings ahead of time. In addition, students will learn substantive and methodological concepts of political science and statistics from readings and lectures. After that, students will practice and apply those concepts in lab sessions and through homework assignments using R, a statistical package.

Required Materials

Software

There are two required statistical packages for this course. We will use R and R studio to manage data and conduct statistical analysis in this class. While I will mainly use R-studio in class, please feel free to use R if you feel more comfortable using the software. No prior knowledge of the two statistical software is expected, and we will install that two software in class during the first week of the class together. The two packages are free and can be downloaded via the internet.

Textbook

There are two required textbooks for this course. The first textbook is Kellstedt, Paul M. and Guy D. Whitten *The fundamentals of political science research*, Cambridge University Press, 2018 (3rd edition). This book will introduce students to the basics of political research. The second textbook we will be using in this class is Fogarty, B. J. *Quantitative social science data with R: an introduction*, Sage, 2018 (1st edition). This book is a useful guide for students who are new to R, the statistical software. This book provides some useful examples and exercises with which one can perform statistical analysis. Additional readings are available on the course web page. Students may use other editions, but please be aware that contents and page numbers can be different.

Recommended Readings

While there are two required textbooks for this course, some other books can help students understand course materials better. I list some books that can improve students' statistical knowledge, software programming, and a general understanding of social science research.

Angrist, J. D., and Pischke, J. S. *Mastering'metrics: The path from cause to effect*, Princeton university press, 2014

Fox, J. *Applied regression analysis and generalized linear models*, Sage Publications, 2015 (3rd edition)

Kaplan, Daniel T. *Statistical Modeling: A Fresh Approach*, 2012, Project Mosaic (2nd edition)

Expectation

We will learn basic statistical theory and perform quantitative analysis in this class. Advanced mathematical and statistical knowledge would be helpful, but that knowledge is not required to take this class. There is no specific prerequisite for this course. However, I made course materials assuming students took basic high school math. Since we have lab requirements for this course, you should bring your own laptop to the lab session to practice the programming in class. Unless notified, we will have two regular class sessions and one lab session to apply our knowledge gained from class sessions.

Course Objectives

1. To understand the basics of quantitative social science analysis
2. To understand the fundamentals of quantitative research design
3. To prepare for taking political science courses with advanced quantitative techniques
4. To be able to apply critical analytical tools in understanding political phenomena
5. To improve students' written communication skills through analytic writing assignments

Grade and Requirements

Course Requirements and Grading Scale

Grade	Percent
A+	98 - 100
A	93 - 97
A-	90 - 92
B+	87-89
B	83- 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D+	67 - 69
D	63 - 66
D-	60 - 62
F	0 - 59

- Class Assignments: 50%
- Class Participation: 10%
- Final Paper: 40%

Assignments

There will be eight short data analysis assignments for this class. The biweekly assignments will be combinations of 1)practicing coding, 2)performing statistical analysis, and 3) interpreting the results. Of the eight assignments, only the best five assignments will be counted toward your final grade, and I will drop three assignments with low grades.

Final Paper

The final paper is a 5 to 6 pages research note that tests the relationship between the two variables of students' interest. Students will freely choose any 'political phenomena' that they think is interesting and test the relationship between two variables using the knowledge gained from this class. Students should prepare the research design of the final paper by the beginning of week 13. Week 13 is a workshop week that is entirely devoted to giving feedback on students' research designs. Also, students will be asked to present preliminary findings from their final project during the last week of the class. The presentation will be counted as one of your assignments (Assignment VIII), and I will provide feedback on all of the presentations. Students can improve their final papers based on the feedback and submit their papers by **December 16**.

Class Participation and Attendance

Attendance for the class session is mandatory, and attendance will be recorded starting 8/29. Attendance is mandatory, and an absence will not be excused unless you have health problems, family emergency, and attend university-sponsored activities (for instance, athletic competitions and conferences) and supporting documents. Students should notify the instructor about their absences and bring supporting documents.

Student Code of class attendance applies to lectures of this class (Student Code 1-501): <https://studentcode.illinois.edu/article1/part5/1-501/> I will provide reasonable accommodations for students who are infected with COVID-19 and Monkeypox.

Also, please do not be late for the class. I understand that you can be late for class once. However, being late for class continuously disrupts the in-class discussion, and that is unacceptable. Failure to correct this behavior will result in a low participation grade.

Class participation will count for 10% of your grade in this course. I expect you to engage in class discussions actively. By actively engaging, I do not mean just talking a lot. I want you to contribute to the discussion by helping other students understand the class materials better.

Extra Credit

Participating in the political science subject pool will offer an extra credit opportunity. Successfully participating and finishing the activity is worth 2 points for the final grade. Details about this opportunity will be provided in class.

Course Webpage

You can find the syllabus, readings, and assignments, and check your course grades from canvas (<https://canvas.illinois.edu>)

Course Policies

Late Assignments

Late assignments will be accepted, but the penalty for a late assignment is five points per day.

Copy Rights

Lecture materials are copyrighted to Jaeseok Cho. Students may not record class lectures or in-class discussions. This is to ensure open and free discussion of class materials. Selling and posting lecture materials, including power-point slides, are prohibited. In addition

to this, selling the course materials is prohibited following the Student Code of Rules of Conduct. (Student Code 1-302): <https://studentcode.illinois.edu/article1/part3/1-302/>

Email Policy

I regularly check my emails and will try my best to get back to you within 24 hours. However, if you do not receive any response from me after 24 hours, that means the email was not delivered to me. In that case, please send me another email.

Academic Integrity

Students should follow university rules for academic integrity. Cheating and plagiarism will not be tolerated. Please review the university rules for your reference. (<https://studentcode.illinois.edu/article1/part4/1-402/>)

Students with Disabilities

If students with disabilities need accommodations for class, please let me know. I have attached the information regarding academic support and accommodations for your reference. (<https://www.disability.illinois.edu/academic-supports-and-accommodations>)

Class Schedule and Readings

Part A: Basics of Political Research

Week 1: Introduction

Announcements

- On Monday, we will review the syllabus and introduce each other

Readings

- *Quantitative social science data with R: an introduction, Chapter 1 and 2*

Lab Session

- Install R and R Studio. We will explore some basic functions of R and R studio together

Week 2: Introduction to Political Science Research I: variations

Announcements

- Assignment I (Explore Variations) is due next Monday by 11:55 pm

Readings

- Kaplan, Daniel T. *Statistical Modeling: A Fresh Approach*, 2012, Project Mosaic (2nd edition), Chapter 3

Lab Session

- We will explore some of the variations using R and real-life data

Week 3: Introduction to Political Science Research I: Data

Readings

- *The fundamentals of political science research*, Chapter 6
- *Quantitative social science data with R: an introduction*, Chapter 8

Lab Session

- We will explore data and practice visualizing data using R

Part B: Basics of Statistics and Research Design

Week 4: Basic Statistical Concepts I

Readings

- *Quantitative social science data with R: an introduction*, Chapter 7

Lab Session

- We will practice how to get descriptive statistics of your data using R

Week 5: Basic Statistical Concepts II

Announcements

- Assignment II (Analyzing descriptive statistics) is due next Monday by 11:55 pm

Readings

- *The fundamentals of political science research*, Chapter 7

Lab Session

- We will keep practicing how to get descriptive statistics of your data using R

Week 6: Research Design and Conceptions of Cause and Causality

Announcements

- There will be no lab session. We will focus more on the theory part

Readings

- *The fundamentals of political science research, Chapter 4*
- D. Freedman, "Statistical Models and Shoe Leather," *Sociological Methodology*, 1991, pp. 291-313

Lab Session

- No lab session this week

Week 7: Basics of Hypothesis Testing

Announcements

- There will be no lab session. We will focus more on the theory part again this week
- Assignment III (Designing your own research) is due next Monday by 11:55 pm

Readings

- *The fundamentals of political science research, Chapter 8*
- *Quantitative social science data with R: an introduction, Chapter 6*

Lab Session

- No lab session this week

Part C: Lineal Model and Regression Analysis

Week 8: Lineal Model I

Announcements

- There will be no lab session. We will focus more on the theory part again this week
- Assignment IV (Creating a hypothesis) is due next Monday by 11:55 pm

Readings

- *Quantitative social science data with R: an introduction, Chapter 11*

Lab Session

- No lab session this week

Week 9: Lineal Model II

Readings

- Kaplan, Daniel T. *Statistical Modeling: A Fresh Approach*, 2012, Project Mosaic (2nd edition), Chapter 7

Lab Session

- We will build linear models using R

Week 10: Bivariate Regression I

Readings

- *The fundamentals of political science research*, Chapter 9

Lab Session

- We will practice bivariate regression analysis using R

Week 11: Bivariate Regression II

Announcements

- Assignment V (Bivariate Regression Analysis) is due next Monday by 11:55 pm

Readings

- No readings this week

Lab Session

- We will keep practicing bivariate regression analysis using R

Week 12: Multivariate Regression I

Announcements

- Assignment VI (Research Design for Final Paper) is due on next Monday by 11:55 pm

Readings

- *The fundamentals of political science research*, Chapter 10
- Gibler, D. M., and Tir, J. "Territorial peace and democratic clustering," *The Journal of Politics*, 76(1), 27-40

Lab Session

- We will practice multivariate regression analysis using R

Week 13: Workshop Week

Announcements

- This week will be entirely devoted to workshops for developing research design for the final paper

Readings

- No readings this week

Lab Session

- No lab session this week

Week 14: Fall Break

Announcements

- No class

Week 15: Multivariate Regression II

Announcements

- Assignment VII (Multivariate Regression Analysis) is due next Monday by 11:55 pm

Readings

- *The fundamentals of political science research, Chapter 11*

Lab Session

- We will continue practicing multivariate regression analysis using R

Week 16: Presentation Week

Announcements

- Assignment VIII is presenting preliminary results of their final project in class
- This week will be entirely devoted to student presentations
- I will provide feedback to all presentations
- I will provide feedback to all presentations

Readings

- No readings this week

Lab Session

- No lab session this week