

SOSC 13200/4: Social Science Inquiry II (Winter 2020)

Meeting Time: Tue/Thu 12:30 – 1:50 PM.

Location: Social Sciences Research Building 108

Instructor: Shu Fu

Office: Grad Student Suite near Pick 316A

Email: fushu@uchicago.edu

Office Hours: Mon 12:00 – 1:30 pm at Pick 507, or by appointment

Course Objectives:

This course is an introduction to the use of quantitative data to explore social scientific theories. You will learn how to approach a social scientific claim, conceptualize it, measure it by data, and evaluate the data. The goal of this course is to develop your ability to increase your level of understanding of the most common statistical concepts and analytical tools and to help you to develop your own research paper.

To guide this introduction, the course will focus on one of the most vivid and important literature of social science: *The American Voter*. We will do so by spending most of the quarter looking at a particular claim related to this question: *What affects individual vote choice?*

Course Organization:

The class meets twice per week for 1 hour and 20 mins each. The course will progress in weekly pace. On each week, class sessions will be one of three types: Discussion (where I guide the class – divided into small groups – through a conceptual discussion about that week’s topic); Demonstration (where I use R to perform a task related to that week’s topic); Lab (where I guide the students through using R themselves to perform a task related to that weeks’ topic).

Course Requirements:

Attendance and Class Preparation:

Students are expected to come to every class and to participate in class activities. You should read the assigned reading(s) for a particular class day prior to coming to class. *If you attend class and do your work responsibly, then you will do well in this class.*

Readings:

With the exception of first 3 weeks (which are already listed on the syllabus), required readings will be made available on the course Canvas page the week prior to the session. Readings will be a combination of academic journal articles, statistics textbooks, programming guidance, and blog posts.

Furthermore, you might also find helpful the following resources. These readings are not required, but are rather additional resources for further learning.

- *Introductory Statistics with R*, by Peter Dalgaard, which is available electronically through the library, or on Canvas.
- *R for Data Science* by Hadley Wickham and Garrett Grolemund, which is in open access at <https://r4ds.had.co.nz/>.
- *ggplot2: Elegant Graphics for Data Analysis*, by Hadley Wickham, which is available on Canvas.

Software, Computer Use, and Datasets:

For this class we will be using R. R is a programming language that is especially powerful for data exploration, visualization, and statistical analysis. To download R, go to CRAN (the Comprehensive R Archive Network) at this site, <https://cran.r-project.org/>.

To interact with R, we use RStudio. Please install the latest desktop version of RStudio. You can download the latest version of RStudio at this site, <https://rstudio.com/products/rstudio/download/>.

The datasets we will be using in the class or their links can be all found on Canvas.

Homework Assignments:

The main assessment in the class will be your performance on seven homework assignments. These assignments will be given at the end of class on Thursday, and be due on the following Monday. Assignments and exercises are due on Canvas before 7pm the day they are due. **Late submissions will be penalized.**

I encourage students to work together on the assignments, but you always need to write and submit your own solutions, and I ask that you make a solo effort at all the problems before consulting others.

Grading

Your final course grade will be figured according to the following cutoffs

Attendance/Class Participation: 10%
Homework Assignments: 70%
Final Paper (details to TBA): 20%

A = 94 – 100	C = 73 – 76
A- = 90 – 93	C- = 70 – 72
B+ = 87 – 89	D+ = 67 – 69
B = 83 – 86	D = 63 – 66
B- = 80 – 82	D- = 60 – 62
C+ = 77 – 79	F = 59 and Below

Course Outline

Week 1: Introducing & R workshop

Tue (Jan 7): Course overview and R Installation

Thu (Jan 9): Learning “our” tools (Prof. John Brehm)

- R basics, R syntax

Week 2: R workshop & Vote Choice Theory

Tue (Jan 14): Data structures and Visualization (Prof. John Brehm)

- tidyverse, ggplot

Thu (Jan 16): Theory of Vote Choice

- William G. Jacoby. 2010. “The American Voter.” In *The Oxford Handbook of American Elections and Political Behavior*, edited by Jan E. Leighley, 262-277. Oxford University Press.

Assignment 1: Practice and Produce a Word/PDF by RMarkdown

Week 3: Conceptualization and Measuring

Tue (Jan 21) & Thu (Jan 23): *Measuring Vote Choice by American National Election Studies (ANES)*

- Donald Green, Bradley Palmquist, and Eric Schickler. 2002. *Partisan Hearts & Minds: Political Parties and the Social Identities of Voters*. Yale University Press. Chapter 2.
- Stephen Ansolabehere, Jonathan Rodden and James M. Snyder Jr. 2006. “Purple America.” *Journal of Economic Perspectives* 20(2): 97-118.

Week 4: Sampling

Tue (Jan 28) & Thu (Jan 30): *Random Sample versus Population & Central Limit Theorem*

Assignment 2: ANES Data Loading and Variable Recoding

Week 5: Observing

Tue (Feb 4) & Thu (Feb 6): *Seeing a “there” by Observing Patterns; Visualization*

Assignment 3: Plotting Vote Choice

Week 6: Analyzing

Tue (Feb 11) & Thu (Feb 13): *See a “there, there” with T-tests and p-values*

Assignment 4: Basic Analysis of Vote Choice

Week 7: Complicating

Tue (Feb 18) & Thu (Feb 20): *Threats to Inference; Introduction to Regression; Bringing in new/control variables; Conditional T-tests*

Assignment 5: Adding and Evaluating Control Variables

Week 8: Regressing

Tue (Feb 25) & Thu (Feb 27): *OLS Regression; Bivariate Regression and multivariate Regression*

Assignment 6: Regression Analysis I

Week 9: (More) Regressing

Tue (Mar 3) & Thu (Mar 5): *Regressing with a binary outcome – Linear Probability Model and Logit Model*

Assignment 7: Regression Analysis II

Week 10: Extension and Further Inquiry

Tue (Mar 10): *Guidance on Final Paper*

Final Paper: TBA