



Sociology 302: Statistics for Social Research
Spring 2023

	Lecture	Labs
Days	Tuesdays & Thursdays	Fridays
Hours	12:30 – 1:45 PM	<u>Section 2</u> 12:30 – 1:45 PM
Places	GCASL, Room 383	BOBST LL149 <u>Section 3</u> 9:30 – 10:45 AM 7E12 125
Instructors	Mike Hout	Chelsea Daniels
Contact	mikehout@nyu.edu 295 Lafayette St. [Puck Building] Room 4139	cpd317@nyu.edu 295 Lafayette St. [Puck Building] Room 4132
Office hours	Tuesdays, 3:30 – 5 PM ¹	Thursdays, 2:30 – 4 PM

¹Sign up online at www.wejoinin.com/sheets/bwpoa.

COURSE DESCRIPTION

An undergraduate course that introduces students in the social sciences (sociology, anthropology, political science, and metropolitan studies) to statistical logic and methods. We explain how to use statistics to describe data and make inferences about populations. We build up from one-variable descriptions to two-variable descriptions and inferences, to multivariate methods. The course concludes with a practicum in which students apply what they have learned to a real-data problem. [Required of sociology majors.]

GOALS OF THE COURSE

1. Understand the basic concepts and practices of statistics.
2. Learn how social scientists use those concepts and practices.
3. Master core techniques and gain some expertise in applying them to real social science data.

MAIN ACTIVITIES

1. Participate in lectures and labs.
2. Do out-of-class exercises using simulated and real data.
3. **Four** in-class quizzes.
4. Write a **5-page** research memo, reporting original results.

ATTENDANCE

Students are expected to attend every session ready to participate. Uncertainties around us may limit that from time to time. We have to take care of our health and do what we can to avoid spreading Covid-19, flu, or whatever is going around. *Please stay away from campus if you have any Covid-like symptoms. Get tested. Resume regular activities only if you are sure you are not spreading the virus.* See:

<https://www.nyu.edu/life/safety-health-wellness/coronavirus-information.html>

for the latest campus policies and resources.

GRADING

In-class quizzes (4) 60% of grade

There will be four in-class quizzes covering material since the previous quiz. Each will count as 20% of the grade. I will drop your worst score, so only 3 quizzes will count toward your grade.

Class & lab participation 20% of grade

Participation consists of preparing for class, being ready to be called on, and turning in assignments. Asking useful questions is also part of participation.

Research memo 20% of grade

Each student will write a 5-page memo presenting an interesting statistical result and discussing its social science implications.

Due 11 May

ACADEMIC INTEGRITY

NYU expects and requires its students to adhere to the highest standards of scholarship, research, and academic conduct. Policies and procedures are outlined at:

<https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/academic-integrity-for-students-at-nyu.html>.

COMMUNICATION

We will use [Brightspace](#) for course-related communications. Make sure your devices are set to receive email and/or text notifications from [Brightspace](#).

You may, of course, email Hout and/or Daniels directly; please put “[Soc 302]” in the subject line.

TEXTBOOK

We will use an open-source, online textbook this semester:

<https://www.openintro.org/book/os/>

The electronic version is free. You have the option of purchasing \$20 or \$25 paperback editions (order through the [OpenIntro](#) website).

A CALCULATOR FOR IN-CLASS WORK BUT NO PHONES OR LAPTOPS IN CLASS

You will need a calculator for the lectures, quizzes, and labs. I ordered two as options through [NYU Bookstore](#), but any comparable \$20 (more or less) calculator with a square root ($\sqrt{\quad}$) key and a natural logarithm (\ln) key will be fine. The calculator apps on your phone are *not* acceptable for quizzes because we don't want you looking things up.

Unless otherwise noted, a closed laptop rule during lecture will be enforced and other devices will need to be silent during lecture.

COURSE SCHEDULE

<i>Month</i>	<i>Day</i>	<i>Day of week</i>	<i>Topic</i>	<i>Chapter</i>	<i>Section</i>
Unit 1: Descriptive Stats					
January	24	Tu	Intro & enrollment	None	
	26	Th	Research process	None	
	31	Tu	Data sources: Sampling & experiments	1	all
February	2	Th	Describing data: averages, spread	2	all
	7	Tu	Visualizing data: plots of data & statistics		
	9	Th	Unit 1 review		
	14	Tu	Quiz #1		
Unit 2: Inferential Stats					
	16	Th	Probability basics	3	all
	21	Tu	Probability distributions	4	1&3
	23	Th	Probability & inference	5	all
	28	Tu	Hypothesis testing: categorical data	6	1-2
March	2	Th	Hypothesis testing: numerical data	7	all
	7	Tu	Unit 2 review		
	9	Th	Quiz #2		
13-17 Spring Break (no lectures or labs)					
Unit 3: Regression					
	21	Tu	What's a research memo?	None	
	23	Th	Regression: introduction	8	1-2
	28	Tu	Regression: deeper	8	3-4
	30	Th	Multiple regression: introduction	9	1-2
April	4	Tu	Multiple regression: deeper	9	3-4
	6	Th	Unit 3 review		
	11	Tu	Quiz #3		
Unit 4: Categorical Outcomes					
	13	Th	Categorical data: A regression approach	None	
	18	Tu	Categorical data: logistic regression	9	5
	20	Th	Models, mediation, & causal inference	None	
	25	Tu	Unit 4 review		
	27	Th	Quiz #4		
Unit 5: Research Memo					
May	2	Tu	Data visualization	None	
	4	Th	Recap & general Q&A	None	
	11	Th	Research memo due		