Introduction to Social Statistics

Sociology 3130 Gibson Hall 041: M-F 10:30AM - 12:45PM



Instructor: Sarah E. Mosseri Office Hours: Monday, Wednesday 1:30-2:30pm; Randal 222 Email: sem2gw@virginia.edu

COURSE OVERVIEW

The function of sociology, as of every science, is to reveal that which is hidden. --Pierre Bourdieu

This course presents a general overview of the statistical methods used in sociology. Sociology describes social phenomena and uses theory to understand and explain the patterns it documents. As opposed to common sense, sociological theories are systematically tested in various settings to gain a sense of their validity and scope and thus improve our understanding of how the social world works. Statistics is an important resource within the sociologist's toolbox, allowing researchers to test theories on thousands, even millions, of cases. Thus, a basic understanding of statistics is crucial for both reading and conducting sociological research.

The value of statistical knowledge also extends beyond academic pursuits. Statistics are used to evaluate public health programs, marketing campaigns and legislative actions. Further, taking the form of fact, statistics are used in abundance in the media, political debates and everyday conversation. Without a basic literacy in statistics, it is difficult to comprehend and think critically about this commonly used form of knowledge. By gaining a basic understanding of statistical concepts and processes, you will learn important career skills and become a more conscious and critical participant in the social world.

COURSE OBJECTIVES

By the end of this course, you will be able to:

- Recognize and describe different kinds of data, both numerically and graphically;
- Evaluate whether statistical patterns and associations are generalizable to a broader population;
- Determine the most appropriate statistical methods for examining a claim;
- Use the statistical software, STATA, to understand and analyze a dataset;
- Interpret the results of statistical analysis by putting numbers in context and developing meaningful statements about the social world;
- Comprehend and assess statistical studies published in research journals and the press.

MATERIALS

Textbook

Richard De Veaux, Paul Velleman, and David Brock: *Intro Stats, 3rd Edition* *The textbook is available at the UVa bookstore. You are also welcome to order used versions online.

Additional Materials

You will be required to do calculations in class and on your own. Thus, you will need a calculator. The calculator should be able to find powers and square roots but does not need to do anything more complex. You will *not* be allowed to use your phone as a calculator.

You will be using the statistical package, Stata, in this course. Stata is offered on the Hive, which requires a virtual client to access. You can also purchase Stata through UVa at this link: http://data.library.virginia.edu/research-software/stata/.

REQUIREMENTS

Your grade for this course will be based on attendance and participation, homework assignments, a research exercise and two exams. Each of these, as well as the distribution of points, is discussed below.

Attendance & Participation (20%)

Statistics can be a difficult subject to master, and it requires a constant, participatory (not passive!) commitment on your part. In addition, the format of the summer session requires that we move very quickly. If you miss even one class, it can be very difficult to catch up. Thus, attendance and participation are essential. It is to your advantage to make the most of our time together; do not shortchange yourself or your peers by not doing the reading <u>before</u> each class or by not engaging and asking questions during class.

Homework (20%)

You will complete six homework assignments during this course. These assignments will give you the opportunity to practice the concepts covered in class and, in many cases, will require both hand calculations and analyses in Stata. Completing homework assignments on time can help you to keep up with the material and prepare for exams.

Homework assignments will be uploaded to Collab at least 48 hours before the due date. To receive full credit, you must submit the assignment on Collab by 8pm on the day it is due. Assignments are graded on a 10-point scale. Do not turn in only results! Show your work in completing each problem—this will allow me to see where you went wrong and guide you appropriately. It will also allow you to receive partial credit. Keep in mind that your peers can be a great resource in solving homework problems, but it is an honor code offense to copy answers from another student.

Research Exercise (20%)

You will be required to complete a directed research exercise at the end of this course. This assignment will require you to use knowledge from the course to address a real sociological question. Specifically, you will analyze and interpret data using Stata to examine a claim about a hypothesized social relationship.

Exams (20% each)

There will be two exams in the course. The exams will be closed book, and you will need to bring a calculator.

POLICIES

Attendance

You will receive a "0" in attendance/participation for each missed class. However, I understand that life happens. Therefore, you are allowed to miss one class (with full credit), no questions asked. All further absences are unexcused, no matter the reason.

Grading

Grades are not up for negotiation. If you believe the grade you received on an exam or assignment is incorrect, you may email a request to have the material in question reviewed. You have one week after the graded material is returned to submit a request. The request should include a copy of the graded assignment, along with a written explanation as to why the original grade should be reconsidered.

I will accept late assignments. All late work will be penalized 20% for each 24-hour period after the due-date.

Communication

The best time to speak with me is in class or during my weekly office hours, held each Monday and Wednesday from 1:30pm-2:30pm in Randall 222. In an effort to avoid time conflicts with other students, I've created an online sign-up sheet that can be accessed here: http://www.wejoinin.com/sheets/ugcds. You may also email me at sem2gw@virginia.edu with specific comments or questions. In general, expect a 24-hour response time.

There is a Collab site for this class. I will use this site to send announcements and to share resources. You can also use the Collab site to communicate with me and with other students throughout the semester.

Honor Code

Your membership in this community binds you to the Honor Code. You are encouraged to write the pledge on your papers, but the guidelines of the honor system apply whether you write the pledge or not. If you have questions, please ask!

Statement on Violence

I am committed to supporting and encouraging students, staff and faculty to take responsibility for safety on our campus. As an instructor, I am considered a "responsible employee" and must report any incidents of violence or sexual misconduct of which I become aware so that the relevant parties can receive the help they need. If you or someone you know experiences stalking, partner violence or sexual assault, please know you are not alone. There are resources that can help: http://www.virginia.edu/sexualviolence

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COURSE SCHEDULE

Date	Торіс	Reading	Due
7/13	Introduction to Class	None	
7/14	Sampling and Survey Methods	Ch 11 & 12	
7/15	Understanding Data	Ch 2	HW1
7/16	Descriptive Statistics for Quantitative Data	Ch 4	
7/17	Descriptive Statistics for Qualitative Data	Ch 3	
7/20	Data Visualization	None	HW2
7/21	Normal Distributions, Sampling Distributions & z- scores	Ch 6	
7/22	Hypothesis Testing	Ch 18	HW3
7/23	Inferences About Proportions	Ch 20	
7/24	Inferences about Means	Ch 23	
7/27	Review	None	HW4
7/28	Exam 1	None	
7/29	Comparing Means (independent and paired t- tests)	Ch 24 & 25	
7/30	Analysis of Variance	On Collab	HW5
7/31	Comparing Counts (Chi-square)	Ch 26	
8/3	Correlation	Ch 7	HW6
8/4	OLS Regression	Ch 8	
8/5	OLS Regression (con't)	Ch 27	
8/6	Review	None	Research Exercise
8/7	Final Exam	None	