SOC 356 Social Research II
Spring 2018: Tu Th Fr 11:00 – 11:50
Math and Science Center E301A

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Description

This course introduces students to statistical methods used in social research. It fulfills the sociology major requirement for a statistics course. Topics covered include descriptive and inferential statistics, levels of measurement, central tendency and variability, sampling distributions, interval estimation, and hypothesis testing for both categorical and continuous variables. By the end of the semester you should be able to (1) identify appropriate statistical methods for analyzing data, (2) critically evaluate basic statistical information from sources such as news articles and academic journals, and (3) use the programs PSPP and SPSS to conduct your own statistical research.

Text and Materials

Textbook. *Essentials of Social Statistics for a Diverse Society*, 2nd edition, 2015. Chava Frankfort-Nachmias and Anna Leon-Guerrero. ISBN: 9781483359496. (This book is available at the college bookstore. Used or rented copies are also available for a low price on Amazon.)

Canvas. On our Canvas conference you will find (a) lecture overheads that summarize and supplement the textbook, (b) a variety of data sets that you can download to your personal computer, and (c) miscellaneous messages from me to the class. Check the Canvas site at least once per week for new postings.

Calculator. You will need a calculator that is not on your phone or laptop. Make sure the calculator has at least a square root key. Always bring the calculator to class.

PSPP and SPSS. PSPP is a statistical program that mimics the look of SPSS, a popular program widely used in academia and the business world. Unlike SPSS, however, PSPP is free. You can download it to your personal computer and use it to analyze the data sets posted on Canvas. All instructions for downloading and operating the program will be provided. As will be shown, learning how to use PSPP is the same as learning SPSS.

Requirements

Your course grade will be based on take home assignments, a short paper, and class attendance. Details below.

Take home Assignments. There are approximately 10 take home assignments during the semester. In general, you will have at least one week to complete each one (for some assignments, there may be a two-week turnaround). These assignments are designed to assess your understanding of key concepts, your ability to generate and interpret statistical output, and your ability to solve statistical problems by hand and interpret the results. The assignments require you to use the free software PSPP to analyze data sets stored on the Canvas conference. As mentioned above, all the necessary step-by-step instructions will be provided.

These assignments are all open book and open notes. On occasion we will begin an assignment in class together and work through some of the beginning problems as a group, but you will then complete the rest on your own outside of class. This is meant to be independent work – if you have questions, please ask me and not your classmates. The take home assignments are weighted equally, and collectively they contribute **60 percent** toward your overall course grade.

Short Paper. This paper gives you the opportunity to conduct your own analysis and write up the results. The instructions for the paper will be distributed in the last month of the semester, and you will have at least three weeks to complete it (due date TBA). The paper will be roughly 8 to 10 pages in length (including tables and figures). It differs from the take home assignments by giving you much more discretion over the analytic process, i.e., you get to choose which variables to analyze (rather than me telling you which ones to analyze). The paper is worth **30 percent** of your course grade.

Attendance. At the start of each class, attendance will be taken by either calling roll or passing a roll sheet around for you to sign. If you are absent less than four times during the semester, you will receive the full **10 percent** allocated for attendance. Points start being deducted at the fourth absence: If you are absent 4x, then 4 points will be deducted from your attendance grade; 5x equals 5 points deducted, and so on, up to 10 points. Note that you have up to three absences without any deduction. Use these (if you use them at all) for sick days, family emergencies, job interviews, etc. If you have perfect attendance – zero absences – then not only will you receive all 10 attendance points, you will also get two bonus points added to your total earned in the course.

In summary, your course grade in SOC 356 will be based on the following:

Take home assignments	60 percent
Short Paper	30 percent
Attendance	10 percent
TOTAL	100 percent

Grading Scale

Letter grade ranges are shown below. Grades will not be rounded up at the end of the semester because each graded piece of work is open book/notes, and I will also give you generous amounts of help if you ask me. In other words, grades are already "rounded up" by virtue of the open nature of the work.

A	93-100	B+	87-89.99	C+	77-79.99	D+	67-69.99
A-	90-92.99	B	83-86.99	C	73-76.99	D	60-66.99
		B-	80-82.99	C-	70-72.99	F	0-59.99

Other Course Policies

Access and Disability Resources. If you have medical/health conditions that may affect your grade, visit the Office of Accessibility Services (OAS) to arrange accommodations and show me the Accommodation Letter as soon as possible.

A Note on the Classroom Environment. Refrain from chatting with friends during class, entering late, and leaving early. If you need to leave early, let me know beforehand. Mute or turn off cell phones. And the desktop computers in the classroom should be used only for class-related work, not for checking email or anything else.

Honor Code Policy. All work is to be completed in line with the Honor Code of Emory University. By submitting work in this course, you are pledging that your work reflects academic honesty, i.e., you have not lied, cheated, plagiarized or done anything to gain unfair academic advantage for yourself or anyone else. It is up to you to familiarize yourself with the honor code, which you can find at the below link:

http://catalog.college.emory.edu/academic/policies-regulations/honor-code.html

Schedule of Topics and Reading Assignments

In learning statistics it is crucial that you keep up with the materials as they are presented. The lectures and computer work will be <u>much</u> more meaningful if you have done the reading beforehand, because then you will know what's important, what you don't understand, and what questions to ask.

The schedule below shows the weekly topics and assigned readings from **Essentials of Social Statistics for a Diverse Society**. I reserve the right to change the schedule and other features of the syllabus if needed. Fair warning will be given.

Week	Topics	Chapters from *Essentials...*
1/15	First day of class on 1/18	
	Sampling and research design; Levels of measurement	Ch. 1: The What and the Why of Statistics
1/22	Tabular and graphical displays of data	Ch. 2: The Organization and Graphic Presentation of Data
1/29	Summarizing the shape, center, and spread of variables	Ch. 3: Measures of Central Tendency Ch. 4: Measures of Variability
2/5	Probability, normal distributions, and the Empirical Rule	Ch. 5: The Normal Distribution
2/12	Generalizing from sample to population; Sampling distributions and the Central Limit Theorem	Ch. 6: Sampling and Sampling Distributions
2/19	Confidence interval estimation for a single mean or proportion	Ch. 7: Estimation

Week	Topics	Chapters from *Essentials...*
2/26	The basic elements of hypothesis testing; Testing hypotheses about a single mean or proportion	Ch. 8: Testing Hypotheses (read to page 193)
3/5	From univariate to bivariate analysis; Testing for group differences in means and proportions	Read the remainder of Ch. 8 (from p. 193 onward)
3/12	**Spring Break from 3/12 to 3/16**	
3/19	Catch-up and review; Recapping the similarities and differences between interval estimation and hypothesis testing; Pattern, strength, and significance in crosstabulations	Ch. 9: Bivariate Tables (read to page 238)
3/26	Chi-square as an extension of the t-test of proportions; Nominal and ordinal measures of association; Proportional reduction in error	Read remainder of Ch. 9 (from p. 238 onward)
4/2	Causal reasoning; Controlling for a third variable; Typology of multivariate relationships	See overheads on Canvas
4/9	ANOVA as an extension of the t-test of mean difference; Intro to bivariate linear regression	Ch. 10: Analysis of Variance
4/16	Linear regression continued; Diagnosing problems	Ch. 11: Regression and Correlation (read to p. 298)
4/23	From bivariate to multivariate regression and correlation	Read remainder of Ch. 11 (from p. 298 onward)
	Last day of class on 4/27	