

Introduction to Statistics in Sociology

920:312:01/02

FALL 2017

Dr. Jeffrey Dowd

Class hours: MW 3:20 – 4:40

Location: Beck 250 Recitation: Tillet Hall J101/2 OR BRR-4071

Office: Davison Hall (on Douglas Campus) 040 [Hours TH 1-3:30]

Livingston Office Hours: Tillet Learning Center 1-2:30

Email: jdowd@rci.rutgers.edu (put SOC 312 in subject line)

Course Objectives:

- introduce elementary forms of social statistics;
- define the tools and methods social researchers utilize to measure social reality and make empirical generalizations about populations;
- demonstrate the fundamental elements of both descriptive and inferential statistics;
- foster an understanding of the logic behind basic statistical operations and how to interpret findings;
- train students to use SPSS to code and analyze data

There is no required text for this course. Textbooks have risen in cost with no real increase in quality. Instead, many textbooks justify inflated prices by adding low-quality add-ons (e.g. test banks, PPT slides, etc.), which I find counterproductive. If you would like a reference text, any recent used text that includes the subject matter listed in the course schedule will be sufficient. All readings and course resources will be on the Sakai site and/or hyperlinked in this syllabus.

Grading:

Participation/Attendance **(10%)**

There will be a **sign in sheet** for lecture. Students will start out with 10 points for attendance and lose one point for every missed class. I will also consider participation.

NOTE: If you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me and if the absence is excused it is noted in my grading roster.

Assignments/Recitation **(20%)**

You will be responsible for completing SPSS assignments in your recitation sections. The first two assignments will not count towards your final grade, but must be completed. The bulk of your assignment grade will come from several SPSS assignments and completion of paper preparation (e.g. the paper proposal, rough draft, and peer reviews).

Lessons/Study Guide (5%)

Students will work in groups of 4 to compile a lesson. Two students will compile a lesson/study guide and then 2 students will edit the lesson. I will then post these lessons on-line. These lessons will serve as a study guide for all students. In addition, they provide me with a real time means of assessing student understanding. Such a format makes for a more responsive learning experience and, I hope, will alleviate some of the anxiety that often accompanies statistics class.

You may have encountered a version of this in other courses, but if you haven't let me note a few things here. First, I will look over all of these. So don't worry about your classmates coming up with a lesson that is wrong. Second, group work sometimes involves the free-rider problem (where someone can get the benefits of work without doing any themselves). I have tried to account for this by dividing up the tasks. Still, problems do emerge. To be blunt, you need to deal with those problems. One of the things about college that is unlike the so-called "real-world" is the focus on individual accountability. Outside of the classroom you will rarely be individually responsible or accountable for any outcome. Most work you will encounter will be some form of group work. Indeed, any academic work (or any statistical research or presentation for that matter) is more often than not a group project.

Examinations (15% each) *3

Throughout the course there will be three exams. Instead of a final exam, the final paper is due around the date of the final exam.

Final Paper (20%)

For the final paper you will use statistics to explore a topic of your choice. I do not expect a full research paper. Instead, you will use an existing data set (most likely the GSS). A short introduction and literature review (which can be entirely based upon readings from another class) will accompany your methods, findings, and discussion sections. The last two sections will comprise the bulk of your grade. In short, you need to formulate a research hypothesis, test it, and then explain the data and your findings. This paper functions like an exam as I am testing your ability to write coherently about statistical findings.

Grading Scale: A 90-100, B+ 86-89, B 80-85, C+ 76-79, C 70-75, D 66-69, F 65 or below.

Academic Integrity: Rutgers policy can be found here -

http://academicintegrity.rutgers.edu/files/documents/AI_Policy_9_01_2011.pdf

Class Schedule

Week 1:

September 6th (Wednesday) – Introduction

Assignment 1 (Due next class. We will often begin these assignments in class, but I will also post all of these on Sakai)

Recommended Reading: Zimmer - [In Science, It's Never Just a Theory](#)

September 11th (Monday) – Variables and Data
Assignment 2
Reading: Cerulo and Ruane – Numbers Don't Lie

Recitation: Introduction to SPSS

Week 2:

September 13th (Wednesday) – Organization of Information
Assignment 3
Reading: [Kimball and Smith – The Myth of “I’m Bad At Math”](#)

September 18th (Monday) – Graphic Presentation
Assignment 4

Recitation: SPSS 1 Assignment

Week 3:

September 20th (Wednesday) – Measures of Central Tendency
Assignment 5
Lesson 2 – Measures of Central Tendency

September 25th (Monday) – Measures of Variability
Assignment 6
Reading: [Orlin - Number Smoothies](#)

Recitation: SPSS 2 Assignment

Week 4:

September 27th (Wednesday) – Measures of Variability and Exam Review
Lesson 3: Measures of Variability
Reading: [Friedman - The US Non-Existent “Spike in Crime”](#)

October 2nd – Exam 1

In-class exam

Week 5:

October 4th (Wednesday) – The Normal Distribution
Reading: Are You a Dishwashing Robot

October 9th (Monday) – The Normal Distribution
Assignment 7

Here we will also have a discussion about the course and I will respond to feedback. I will also adjust the syllabus accordingly.

Week 6:

October 11th (Wednesday) – The Normal Distribution

Assignment 8

Lesson 4: The Normal Distribution

October 16th (Monday) - Sampling and Sampling Distributions

Assignment 9

Lesson 5: Sampling and the Sampling Distribution

Reading: How Can a Survey of 1000 People Tell You What the Whole US Thinks?

Recitation: SPSS 3 Assignment**Week 7:**

October 18th (Wednesday) – Estimation

Assignment 10

Lesson 6: Estimation

Reading: 5 Key Things to Know About the Margin of Error in Election Polls

October 23rd (Monday) – Paper Preview

Week 8:

October 25th (Wednesday) – Review

October 30th (Monday) – Exam 2

In-Class Exam

Week 9:

November 1st (Wednesday) – Exam 2

In-Class Exam

November 6th (Monday) – Testing Hypothesis

Assignment 11

Reading: How Do Z Scores Relate to Hypothesis Testing?

Recitation: SPSS 4**Week 10:**

November 8th (Wednesday) – Testing Hypothesis

Assignment 12

Lesson 7: Testing Hypothesis

Reading: Statistical Significance is Overrated

November 13th (Monday) – Bivariate Tables

Assignment 14

Lesson 8: Bivariate Tables

WEEK 11:

November 15th (Wednesday) – Bivariate Tables
Assignment 15

November 20th (Monday) – Review

Week 12:

November 27th (Monday) – Exam 3
In-Class Exam

November 29th (Wednesday) – Finish Exam 3
In-Class Exam

Recitation: SPSS 5

Week 13:

December 4th (Monday) – ANOVA and Correlations
Assignment: Paper Proposal
Lesson 9: ANOVA
Lesson 10: Regression and Correlation

December 6th (Wednesday) – SPSS Output and Findings and Peer Review
Reading: Bringing in a third variable
Paper Proposal Due

Week 14:

December 11th (Monday) – Responding to Peer Review, Roundtables and Presenting
Reading: Roundtable Guide
First Draft of Paper Due

December 13th (Wednesday) – Roundtable Presentations
Here you will present your paper to a group of your classmates in a roundtable format. Each student will have 10 to 12 minutes to present. [DO NOT MISS THIS CLASS!]
Rough Draft of Paper Due

NO FINAL EXAM. Your final papers will be due December 18th.

SPSS free trial link [SPSS Statistics]

<https://www.ibm.com/analytics/us/en/technology/spss/spss-trials.html#spss-trials>

If you wish to purchase SPSS for your laptop, go through the Rutgers Software Portal (it's much cheaper, but still \$100 for a year). This may be worth it if you commute to campus and/or you plan on taking another stats related course.