

Introduction to Statistics in Sociology

920:312:01/02 Spring 2018

Dr. Jeffrey Dowd

Class hours: TTH 10:20–11:40

Location: LSH A142

Recitation: TBA

Office: Davison Hall (on Douglas Campus) 040

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

Email: jdowd@sociology.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 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. I will then post these lessons on-line. These lessons will serve as a study guide for all students as well as allow me to assess student understanding.

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). We can control for this by dividing up 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:

January 18th (Thursday) – 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](#)

January 22nd (Monday) – Variables and Data

Assignment 2

Reading: Cerulo and Ruane – Numbers Don't Lie

Recitation: Introduction to SPSS

Week 2:

January 25th (Thursday) – Organization of Information

Assignment 3

Reading: [Kimball and Smith – The Myth of “I’m Bad At Math”](#)

January 29th (Monday) – Graphic Presentation

Assignment 4

Recitation: SPSS 1 Assignment**Week 3:**

February 1st (Thursday) – Measures of Central Tendency

Assignment 5

Lesson 2 – Measures of Central Tendency

February 5th (Monday) – Measures of Variability

Assignment 6

Reading: [Orlin - Number Smoothies](#)

Recitation: SPSS 2 Assignment**Week 4:**

February 8th (Thursday) – Measures of Variability and Exam Review

Lesson 3: Measures of Variability

February 12th (Monday) – Exam 1

In-class exam

Week 5:

February 15th (Thursday) – The Normal Distribution

Reading: Are You a Dishwashing Robot

February 19th (Monday) – The Normal Distribution

Assignment 7

Week 6:

February 22nd (Thursday) – The Normal Distribution

Assignment 8

Lesson 4: The Normal Distribution

February 26th (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:

March 1st (Thursday) – Estimation

Assignment 10

Lesson 6: Estimation

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

March 5th (Monday) – Review

Week 8:

March 8th (Thursday) – Exam 2

In-Class Exam

SPRING BREAK March 10 – March 18th

March 19th (Monday) – Exam 2

In-Class Exam

Week 9:

March 22nd (Thursday) – Testing Hypothesis

Assignment 11

Reading: How Do Z Scores Relate to Hypothesis Testing?

Recitation: SPSS 4

Week 10:

March 26th (Monday) – Testing Hypothesis

Assignment 12

Lesson 7: Testing Hypothesis

Reading: Statistical Significance is Overrated

March 29th (Thursday) – Bivariate Tables

Assignment 14

Lesson 8: Bivariate Tables

WEEK 11:

April 2nd (Monday) – Bivariate Tables

Assignment 15

April 5th (Thursday) – Review

Week 12:

April 9th (Monday) – Exam 3

In-Class Exam

April 12th (Thursday) – Finish Exam 3

In-Class Exam

Recitation: SPSS 5

Week 13:

April 16th (Monday) – ANOVA and Correlations

Assignment: Paper Proposal

Lesson 9: ANOVA

Lesson 10: Regression and Correlation

April 19th (Thursday) – SPSS Output and Findings and Peer Review

Reading: Bringing in a third variable

Paper Proposal Due

Week 14:

April 23rd (Monday) – Paper Workshop and Methods

Methods section of Paper Due

April 26th (Thursday) – Responding to Peer Review, Roundtables and Presenting

Reading: Roundtable Guide

First Draft of Paper Due

April 30th (Monday) - 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 during finals week. I will announce dates in class.

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.