

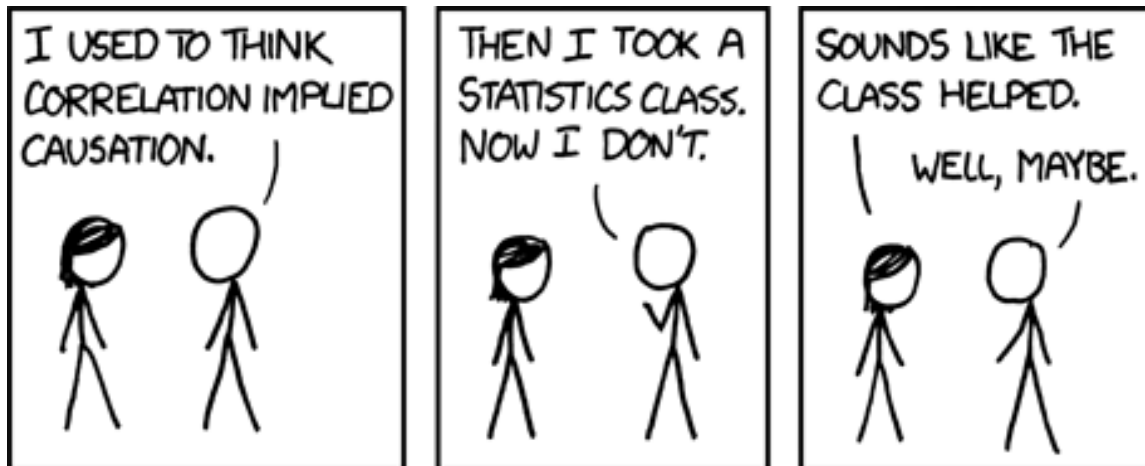
**Sociology 210**  
**Quantitative Sociological Analysis**  
**Colorado State University**  
**Summer 2019**

**Professor:** Dr. Orestes P. Hastings ([Pat.Hastings@colostate.edu](mailto:Pat.Hastings@colostate.edu))

**Office Hours:** Immediately after every class and by appointment in Clark B248

**Lecture:** Monday through Friday, May 20-June 14 at 9:50-11:50am in Clark C144

**Canvas Website:** <https://colostate.instructure.com/courses/85297>



### Overview

This course is designed to help students think quantitatively about sociological questions, understand the basic logic of statistical inference, and perform basic quantitative analyses. Students will learn to be critical consumers of the statistics they encounter in both academic work and everyday life, and will build a strong foundation for future statistical learning. Throughout the course, these topics will be illustrated through relevant sociological examples and applications. Student will put the ideas into practice by completing a large number of problems—both inside and outside of class—and taking the exams.

---

### Learning Goals

- Understand how sociological questions can be answered with quantitative data
- Become familiar with the basic concepts, methods, and techniques of statistical analysis in sociology, including: descriptive statistics, measures of central tendency and variability, probability, statistical inference and hypothesis testing, correlation, and multiple regression.
- Develop skills for thinking critically about the statistics one encounters in scholarly research and everyday life.
- Build a strong foundation in order to excel in future social science quantitative methods courses or any other arena where it is important to make sense out of quantitative evidence.

### Evaluation

Your grade will be based on:

- Assignments (50%)
- Exam 1 (10%)
- Exam 2 (10%)
- Exam 3 (15%)
- Exam 4 (final) (15%)

#### Assignments (in-class and homework) (50%)

You will complete a number of statistical assignments to ensure you are doing the readings and to put into practice the concepts you are learning. Some of this we will be done in class and other parts you will complete outside of class (in which case you are welcome to work together). I will let you know which things need to be turned in and when. **Because we will have discussion and work on assignments almost every class, attendance and active participation is absolutely critical to your success in this course.**

#### Exams (50%)

The four exams will focus on evaluating your understanding of the main ideas and concepts, not how well you can memorize facts. As such, you may use your book, class readings, notes, and a calculator on the exams. **The exams will be cumulative, but weighted towards new material.**

#### Final Grades

You will be graded on an A-F, +/- system, which will be awarded using the percentages in the table at right (fractions of a percent will be rounded *up* to the nearest whole number). If you have any issues or concerns with your grades, contact me as soon as possible. Incompletes will only be granted in exceptional circumstances.

Letter Grade	Percent Range
A+	97%-100%
A	93%-96%
A-	90%-92%
B+	87%-89%
B	83%-86%
B-	80%-82%
C+	77%-79%
C	70%-76%
D	60%-69%
F	Below 60%

#### Missing class and exams

Late work or make-up exams will only be accepted in exceptional circumstances. I understand that, unfortunately, personal and family emergencies do happen. Please contact me if something does come up, and we will work towards finding an appropriate solution. If you are going to be at a University sponsored event or need accommodation to observe an established religious holiday, please let me know as soon as possible so that we can make adequate arrangements.

---

### Textbook and Calculator

There is one required book for this course. This inexpensive book is not a textbook, but describes statistics in a simple(r) way to help you focus on the purposes of statistics. That is, to see the forest through the trees. As such, the class material will be a slightly more technical than the book, and if you miss class, you will have to do more than just the reading to catch up.

Wheelan, Charles. 2013. *Naked Statistics: Stripping the dread from the data*. W. W. Norton & Company.

<https://www.amazon.com/Naked-Statistics-Stripping-Dread-Data/dp/039334777X/>

There will also be assigned readings that will be posted to canvas. **You must complete the readings before the class they are due!**

We will cover all the statistical concepts in class, but for a reference book, I recommend:

David M. Lane, *Introduction to Statistics* (<http://onlinestatbook.com/>)

It is online, searchable, and free!

You will need a scientific calculator in class. You do not need a graphing calculator. **Bring your book and calculator to every class.** And you will also be able to use them on the exams!

---

### Other Important Matters

#### *Technology*

Do not use your phone/computer/tablet for non-class purposes during class. Doing so will negatively affect your grade.

#### *In-Class Decorum*

Please come to class on time and be ready to engage the material we are covering in class. Colorado State University has stated five Principles of the Community: inclusion, integrity, respect, service and social justice (<http://diversity.colostate.edu/principles-of-community/>). Your conduct in this class should adhere to these to help us generate an open, tolerant, and respectful learning environment that we can all succeed in.

#### *Office hours*

I encourage you to take advantage of my office hours. I am happy to discuss course material, the assignments, your sociological interests, or anything else that would be useful to you.

#### *Academic Integrity*

The course will adhere to the Academic Integrity Policy of the Colorado State University General Catalog (<http://catalog.colostate.edu/general-catalog/policies/students-responsibilities/>) and the Student Conduct Code (<https://tilt.colostate.edu/integrity/knowTheCode/>). Do your own work. Don't cheat. Violations will be addressed through the appropriate University mechanisms.

#### *Resources for Disabled Students*

If you have a diagnosed learning or physical disability, which may require special accommodations, please talk to me at the beginning of the semester. The university's Student Disability Center (<https://disabilitycenter.colostate.edu>) can also help facilitate your individual needs. I will work with you and the Student Disability Center to make sure that any individual needs are appropriately accommodated.

#### *Support*

Any student who may be the victim of sexual harassment, sexual misconduct, relationship violence, stalking or retaliation is encouraged to report to CSU through one or more of the following resources:

- Emergency Response 911

- Deputy Title IX Coordinator/Office of Support and Safety Assessment (970) 491-1350
- Colorado State University Police Department (non-emergency) (970) 491-6425

For counseling support and assistance, please see the CSU Health Network, which includes a variety of counseling services that can be accessed at: <http://health.colostate.edu/>

And, the Sexual Assault Victim Assistance Team is a confidential student resource that does not have a reporting requirement and that can be of great help to students who have experienced sexual assault. The web address is <http://www.wgac.colostate.edu/need-help-support>.

Need Help? CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970-491-6053 or go to <http://health.colostate.edu>. If you are concerned about a friend or peer, tell someone by calling 970-491-1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (<http://supportandsafety.colostate.edu/tellsomeone>). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.

**COURSE OUTLINE**

The instructor may change the schedule depending on how quickly and slowly topics are covered and how the class is doing. If there are changes to this schedule, you will receive adequate notice.

#	Date	Topic(s)	Readings to do before class (NS = Naked Statistics)
1	5/20	Introductions, data and statistics, frequency distributions	
2	5/21	Measures of the “middle”	NS Ch 1 & 2
3	5/22	Measures of variability	NS Ch 3
4	5/23	Application: income distributions and inequality	“Everything you need to know about income inequality” <a href="https://www.vox.com/2014/5/7/18076944/income-inequality">https://www.vox.com/2014/5/7/18076944/income-inequality</a>
5	5/24	<b>Exam 1</b>	
	5/27	Memorial Day, no class!	
6	5/28	Correlation	NS Ch 4
7	5/29	Probability	NS Ch 5
8	5/30	Controversy in probability	NS Ch 6 (Ch 5.5 optional)  “Ban the Box’ does more harm than good” <a href="https://www.brookings.edu/opinions/ban-the-box-does-more-harm-than-good/">https://www.brookings.edu/opinions/ban-the-box-does-more-harm-than-good/</a>  “Ban-the-Box ‘Statistical Discrimination’ Studies draw the wrong conclusions” <a href="https://nelp.org/blog/ban-the-box-statistical-discrimination-studies-draw-the-wrong-conclusions/">https://nelp.org/blog/ban-the-box-statistical-discrimination-studies-draw-the-wrong-conclusions/</a>
9	5/31	<b>Exam 2</b>	
10	6/3	Data, sampling, error, bias	NS Ch 7
11	6/4	Generalizing from samples and the Central Limit Theorem	NS Ch 8
12	6/5	Inference	NS Ch 9
13	6/6	Application: Polling	NS Ch 10
14	6/7	<b>Exam 3</b>	
15	6/10	Regression: basic concepts, bivariate	NS Ch 11
16	6/11	Multiple regression, regression problems	NS Ch 12

17	6/12	Reading a quantitative article	Milkman, Reese, and Roth. 1998. "The Macrosociology of Paid Domestic Labor" <i>Work and Occupations</i>
18	6/13	Big data, the future of statistics, wrapping up	Will You Graduate? Ask Big Data ( <a href="https://www.nytimes.com/2017/02/02/education/edlife/will-you-graduate-ask-big-data.html">https://www.nytimes.com/2017/02/02/education/edlife/will-you-graduate-ask-big-data.html</a> )  How Democracy Can Survive Big Data ( <a href="https://www.nytimes.com/2018/03/22/opinion/democracy-survive-data.html">https://www.nytimes.com/2018/03/22/opinion/democracy-survive-data.html</a> )
19	6/14	<b>Final Exam</b>	

**Bonus readings**

"The Trouble with College Rankings"

<https://www.newyorker.com/magazine/2011/02/14/the-order-of-things>

"Science Isn't Broken" *FiveThirtyEight*

<http://fivethirtyeight.com/features/science-isnt-broken/>

"Politics and the New Machine" *The New Yorker*

<http://www.newyorker.com/magazine/2015/11/16/politics-and-the-new-machine/>

How "Big Data" Went Bust

<https://slate.com/technology/2017/10/what-happened-to-big-data.html>

Age of Big Data

<https://www.nytimes.com/2012/02/12/sunday-review/big-datas-impact-in-the-world.html>