

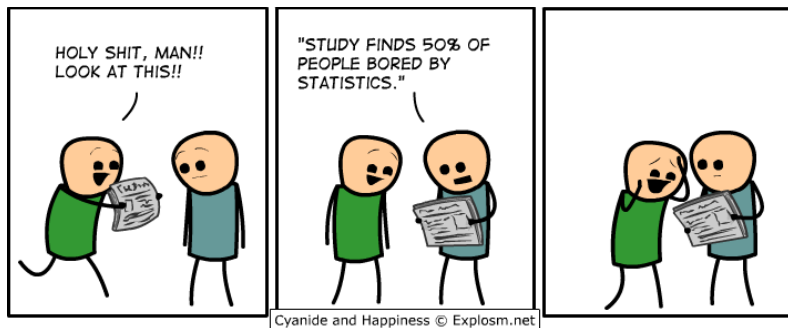
Sociology 210
Quantitative Sociological Analysis
Colorado State University
Spring 2021

DUE TO COVID-19, THIS CLASS IS ONLINE

Professor: Dr. Pat Hastings (Pat.Hastings@colostate.edu). Tuesdays 12-2 p.m. and by appointment (please email to schedule)

GTA: Yue Xu (Yue.Xu@colostate.edu). Lab: Fridays from noon-12:45 p.m. (just drop in via Zoom) and additional office hours by appointment (please email to schedule)

Canvas website: <https://colostate.instructure.com/courses/120318>



Overview

This course helps students think quantitatively about sociological questions, understand the basic logic of statistical inference, and perform simple 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. Topics will be illustrated through relevant sociological examples and applications, and will be reinforced through quizzes, assignments, and exams.

Learning Goals

- Understand how sociological questions can be answered with quantitative data.
- Gain familiarity 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 encountered in academic research and everyday life.
- Build a strong foundation to excel in future social science quantitative methods courses or any other arena where it is important to make sense out of quantitative evidence.

Structure of the course

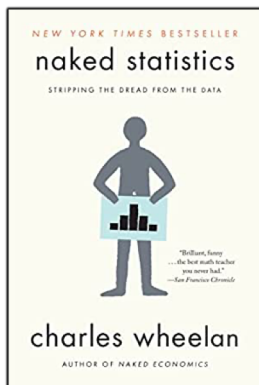
Modules: The course is structured around weekly modules. The topics of these modules are described in the schedule below. Each module will include notes, readings, videos, a quiz, and an assignment. All instructions for the modules will be posted on Canvas.

Synchronous meetings: There will be 4 synchronous meetings from noon-12:50 p.m. (Mountain Time) on dates listed in the Course Schedule. The first meeting we will go over the plan for the semester. At the remaining three meetings, I will summarize and review the material from the previous modules. Attendance is strongly encouraged, but each of these meetings will be recorded and posted to Canvas for those who cannot attend.

Labs: The course GTA will lead a weekly “lab” on Fridays from noon-12:45 p.m. This optional time will be for students to work on the assignments and get help and guidance as needed. Students who attend are expected to have started the assignment before the lab period. Additional details will be announced on Canvas.

Communication: Because this is a completely remote course, online communication will be critical for our collective success. In general, I am happy to answer simple questions via email or Canvas messages. I check email/Canvas frequently, but feel free to reach out again if you don’t hear from me within 24 hours. If an issue is complex, I will ask that we set up a time to meet.

Office hours: I encourage you to use my office hours to discuss issues you may face or if you simply need help with the material and assignments. I am also happy to meet with you at a different time that works better for you (it’s easiest if you suggest some times when you reach out). Meetings will be on Zoom using the link posted on Canvas unless you would prefer a phone call. Likewise, the course GTA is available for virtual office hours (in addition to the lab), and you can schedule more through a simple email or Canvas message. Please email either of us to arrange a meeting.



Readings 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. As such, the class material will be a slightly more technical than the book.

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/>

All other materials for the course (readings, notes, videos) will be posted on Canvas.

You will need a scientific calculator (e.g., one that can take the square root of a number). You do not need a graphing calculator. Your smartphone will probably work, but you might find it easier to have a dedicated calculator. Here’s one that costs just \$9:

<https://www.amazon.com/Texas-Instruments-TI-30Xa-Scientific-Calculator/dp/B00000JBNS>

Evaluation

Your grade will be based on: Assignments (40%), Quizzes (25%), Exam 1 (10%), Exam 2 (10%), and the Final Exam (15%)

Assignments: Each module will have an assignment to put into practice the concepts you are learning. You are welcome to work with others as you complete the assignments, but write up your own assignment. Please upload the completed assignment to Canvas as a single PDF or MS Word Document. Additional instructions are included in each assignment. Personal feedback and solutions will be provided for each assignment.

Quizzes: Each module will have a multiple-choice quiz that you will complete on Canvas. These will help to ensure that you have completed and understood the readings and have watched the videos assigned to each module. The quizzes will be untimed and open-book, and they will be graded immediately after being submitted so that you can assess your comprehension.

Exams: The three exams will be given to evaluate your understanding of the main ideas and concepts, not how well you can memorize facts. You may use your book, readings, notes, and a calculator on the exams, but you cannot obtain help from others. The exams will be cumulative, but mostly focused on new material.

Final Grades: Grades will be assigned on an A-F, +/- system (fractions of a percent will be rounded *up* to the nearest whole number) as described in the table. If you have any issues or concerns with your grades, contact me as soon as possible. Incompletes will only be granted in exceptional circumstances.

Numeric grade	Letter grade
97.01-100	A+
92.01-97	A
89.01-92	A-
86.01-89	B+
82.01-86	B
79.01-82	B-
76.01-79	C+
69.01-76	C
59.01-69	D
below 59	F

Late work: I understand that many factors may affect when you can do the work for this class. Thus, **all quizzes and assignments will be due at midnight at the end of the day they are due and will have an additional 24-hour grace period during which they will still be accepted without penalty** (e.g., an assignment due Friday will be accepted without penalty until midnight Saturday). Contact me if you need to turn work in late beyond that. While I will try to be as flexible as possible, in most cases late work will not be accepted once the solution has been posted to Canvas without prior approval from me.

How Do I Learn This Stuff?

Since this is a course about data and statistics, it will likely feel different from other sociology courses you have taken. Here is some advice:

- Most of the material is cumulative, so it is **absolutely essential that you keep up with the course material. If you find yourself falling behind, ask for help!**
- **Do ALL the readings and watch ALL the videos.** These are not “supplemental” to my lectures and notes, but in fact are meant to precede them. My lecture material assumes that students have already completed the readings and videos, and there are specific questions from them on the quizzes.
- Being good at statistics requires thinking through how to solve problems. Statistics cannot be learned simply by reading a book or listening to a lecture. You should not expect to really understand the material until after you have completed the relevant assignments. **You can also learn a great deal (and save some time!) by working with others on the assignments.**
- Learning to do statistics is in many ways like learning a language. It gets easier the more you use it. **Start the modules early so you have time to work on them in multiple sessions** and so can get help if you need it.
- Finally, know that I am aware that many of you are dealing with more challenging situations than you might in typical face-to-face semester—including family responsibilities, mental and physical health issues, precarious housing, and unstable work schedules. **My hope is that this class is enjoyable and useful to you, without being a tremendous burden. If there are external factors that are detrimentally affecting your performance in this class, please feel free to let me know** and I will take that into account as well as I can.

COURSE SCHEDULE

The will likely evolve as the course progresses.

Module	Week	Topic(s)
1	1/20-1/22	What's statistics? What's the point? Class meeting 12-12:50 p.m. on January 20 via Zoom
2	1/25-1/29	What's a data distribution? How can we measure its "middle" and its "spread"? (Mean, Median, Mode, Range, Standard Deviation)
3	2/1-2/5	What's correlation?
4	2/8-2/12	What's probability? How do we use it? And misuse it?
	2/15-2/19	Review, Synthesis, and Exam 1 Class meeting 12-12:50 p.m. on February 15 via Zoom
5	2/22-2/26	What makes data good or bad?
6	3/1-3/5	How does data a matter for politics?
7	3/8-3/12	What's the normal distribution?
8	3/15-3/19	What's the Central Limit Theorem?
	3/22-3/26	Review, Synthesis, and Exam 2 Class meeting 12-12:50 p.m. on March 22 via Zoom
9	3/29-4/2	How can we test claims about a population with data from a sample? (Inference and Hypothesis testing)
10	4/5-4/9	How does polling work? Why is it so hard to "get right"?
		Spring Break
11	4/19-4/23	What's regression? (Bivariate Regression; Explanation and Prediction)
12	4/26-4/30	What's multiple regression and why is it so awesome? (Controlling for Confounders)
	5/3-5/7	Review, Synthesis, and Final Exam (due midnight on Wednesday, May 12) Class meeting 12-12:50 p.m. on May 3 via Zoom

Other Important Matters

Copyrighted Course Materials: Please do not share material from this course in online, print, or other media. Course material is the property of the instructor who developed the course. Materials authored by third parties and used in the course are also subject to copyright protections. Posting course materials on external sites (commercial or not) violates both copyright law and the CSU Student Conduct Code. Students who share course content without the instructor's express permission, including with online sites that post materials to sell to other students, could face appropriate disciplinary or legal action.

Academic Integrity: This course will adhere to the CSU Academic Integrity Policy as found on the Student' Responsibilities page of the CSU General Catalog (<https://catalog.colostate.edu/general-catalog/policies/students-responsibilities/#academic-integrity>) and in the Student Conduct Code (<https://resolutioncenter.colostate.edu/wp-content/uploads/sites/32/2018/08/Student-Conduct-Code-v2018.pdf>) Do your own work. Don't cheat. If you are unsure what is permissible, please speak with the instructor. Violations will result in a grading penalty and be addressed through the appropriate University mechanisms.

Important information for students on COVID-19: All students are required to follow public health guidelines in any university space, and are encouraged to continue these practices when off-campus(es). Students also are required to report any COVID-19 symptoms to the university immediately, as well as if they have potentially been exposed or have tested positive at a non-CSU testing location. If you suspect you have symptoms, please fill out the COVID Reporter (<https://covid.colostate.edu/reporter/>). If you have COVID symptoms or know or believe you have been exposed, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you; if you report to your instructor that you will not attend class due to symptoms or a potential exposure, you are required to also submit those concerns through the COVID Reporter. If you do not have access to the internet to fill out the online COVID-19 Reporter, please call (970)491-4600. If you report symptoms or a positive test, your report is submitted to CSU's Public Health Office. You will receive immediate, initial instructions on what to do and then you will also be contacted by phone by a public health official. Based on your specific circumstances, the public health official may:

- choose to recommend that you be tested and help arrange for a test
- conduct contact tracing
- initiate any necessary public health requirements or recommendations and notify you if you need to take any steps

If you report a potential exposure, the public health official will help you determine if you are at risk of contracting COVID.

For the latest information about the University's COVID resources and information, please visit the CSU COVID-19 site (<https://covidrecovery.colostate.edu/>).

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 course. The Student Disability Center (<https://disabilitycenter.colostate.edu>) can also help facilitate your individual needs. I will work with you and to make sure 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.