SOCY-2061: Introduction to Social Statistics
Spring Semester 2018

Lecture: Monday and Wednesday 9AM-9:50AM
Lab: Thursday 8-8:50am; Friday 12-12:50pm; Friday 2-2:50pm

Instructor: Professor Amanda Stevenson
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Course Contacts

Name_____Email/phone_____

Name_____Email/phone _____

Course Description

Statistics is a powerful way to understand the world. It need not be difficult or scary. In fact, this course will focus more on concepts than computation. If you like to think critically, this course will give you the tools to critically evaluate statistical evidence.

This course provides an introduction to descriptive and inferential statistical methods for the social sciences. Alongside statistical methods and concepts, it provides opportunities to become a critical consumer of statistical claims. By the end of the course students should be able to read a newspaper article which makes use of statistics and assess whether or not the article's claims are substantiated.

We will discuss statistical tools as strategies for understanding the social world, but many other domains use the same practices. For example, many other academic disciplines also use statistics and many firms seek graduates with statistical literacy. Thus, the skills this class provides may be key to endeavors both within and beyond sociology and may be key in future employment.

Course Goals

By the end of this course, students will:

- Have foundational quantitative reasoning skills for future academic and professional data analysis tasks
- Be able to define and understand key statistical concepts
- Be able to select a strategy for summarizing data
- Be able to compute and interpret basic descriptive and inferential statistics
- Have a familiarity with the use and limitations of regression

Textbook

The text for this course is:

Essentials of Social Statistics for a Diverse Society, by Leon-Guerrero and Frankfort-Nachmias, Second Edition.

It is available at the CU Bookstore and may be purchased as a digital edition.

https://us.sagepub.com/en-us/nam/essentials-of-social-statistics-for-a-diverse-society/book243848

Course Requirements and Grading

Lecture

You are responsible for attending lecture. If you must miss a lecture, be sure to get notes from another student. Dr. Stevenson's presentations will not be available online in order to assure that you attend.

Readings

You are responsible for completing all readings before the lecture for which they are assigned, with the exception of the first day of class. The posted schedule of readings is subject to change. Reductions or changes in the required readings for subsequent classes may be announced in class or on Canvas.

Attendance (Total 100 points)

Attendance at weekly scheduled labs will be required and will be used as the basis of your overall attendance grade. You are expected to attend the lab time for which you are registered. These labs will provide an opportunity to work through problem sets in small groups with Alaina present to answer any questions. Students who also participate meaningfully during lecture may receive additional points for participation.

Homework Problem Sets (Total 300 points)

Learning statistics requires practice, which assigned and graded problem sets provide. Five problem sets will be provided. Each should be worked independently by each student. Feel free to discuss the problems among yourselves, but the work you turn in must be your own.

Key information about homework problem sets:

- Type up or very neatly write out your homework solutions and turn them in on Canvas before 9am on the due date. Emailed documents will not be accepted except in extraordinary circumstances.
- Your homework solutions must be easy to read/legible, spell-checked, grammar-checked, and proofread: The quality and clarity of your writing and your submission's appearance **will** impact your grade.
- Your lowest homework score will be dropped from your grade.
- **No late homework will be accepted – if you find yourself unable to complete a problem set on time, you may use your dropped grade.**

Midterm Exam (300 points)

A midterm exam (held during lecture on 3/5/18) will cover materials in Chapters 1-5. The exam will be a mixture of worked problems, short answers, and multiple choice. It will have one or two brief essay questions where students will be asked to interpret statistical claims.

Final Exam (300 points)

The final exam (held during the official final exam time for the course) will cover all material from the course. The exam will be a mixture of worked problems, short answers, and multiple choice. It will have one or two brief essay questions where students will be asked to interpret statistical claims.

Grades

Final grades will be based on student's total points as a percent of all available points. Anticipated total available points in the class is 1000. Please note that Canvas' grading feature is somewhat imperfect so do not assume that grades there are accurate. Grades will be calculated as below:

Homework problem sets	300 points	30%
Lab attendance	100 points	10%
Midterm	300 points	30%
Final	300 points	30%
Total available points	1000 points	

Assignment of letter grades based on percentages of total points will be as follows, employing standard rounding when percentages fall between whole numbers: 94%+ = A; 90%-93%=A-; 87%-89%=B+; 83%-86%=B; 80%-82%-B-; 77%-79%=C+; 73%-76%=C; 70%-72%=C-; 67%-69%=D+; 63%-66%=D; 60%-62%=D-; 59% & below=F.

Course Policies

1. Getting to class late, sleeping, talking out of turn, reading, using your cell phone or other device, or otherwise being distracted and distracting, are not acceptable classroom activities.
2. Because they distract other students, laptop computers, tablets, and other digital note-taking devices are only permitted in the back row and sides of the classroom unless you notify me that you have a documented disability requiring their use in another part of the room.
3. Please let me know immediately if you have a health problem or disability that necessitates leaving the room during class time, or if you have a conflict that regularly prevents you from getting to class on time.
4. If you miss a class, please get notes from a classmate rather than asking Alaina or me for notes. **You are responsible for all information communicated in class, whether or not you are in attendance.** In addition, information on scheduling changes, assigned work, and grades will be emailed and/or posted on Canvas. Make sure to check your CU email regularly.
5. All assignments must be completed on time and handed in on Canvas by the start of class on the stated due date. **Emailed documents will not be accepted except in extraordinary circumstances.** Written work must be spell-checked, grammar-checked, and proofread: The quality of your writing will impact your grade.

6. We will not give incompletes in this course except under extremely unusual, well-documented circumstances.
7. Please come to Dr. Stevenson and Alaina's office hours if you have any questions about the material covered in this course. During most lecture and lab periods there will also be time to ask questions. Email is not a good medium for answering questions about the material in this course. Therefore, **we will not answer questions about course content over email.**
8. For privacy reasons, grades cannot be discussed over email.
9. We want you to do well in this class. If you become concerned about your progress, please see us immediately. Do not wait until the end of the semester when you have no more work to complete that can raise your grade. When we return written work to you with a grade, take some time to read our comments. If you have concerns, make an appointment with one of us during office hours and bring your specific questions or comments.

Communication

Lecture, lab, and office hours are the best times to ask questions about course material.

If you email us about the course, use "SOCY-2061 Spring 2018" in the subject line. Professor Stevenson and Alaina will each check their course email once per day on week days. We will strive to respond to your course emails within 24 hours during the academic week.

Important information will be communicated over email and via Canvas, so make sure that you regularly check the email address listed for you in CU's administrative system. The course web page is on Canvas. The syllabus, schedule, handouts, assignments, grades, and other information will be posted on the Canvas site, and you will turn in some assignments there. The most recent course information will be available here, as information that is on this syllabus may be changed over the course of the semester. If you select the option to receive email updates, you can be notified when important material is posted on the website. But in general, you must regularly log into Canvas so that this important information can reach you.

Students with Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website (www.colorado.edu/disabilityservices/students). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website and discuss your needs with Dr. Stevenson.
For exam accommodations, provide your letter to Dr. Stevenson at least two weeks prior to the exam. Then, check in with her about any accommodations at least a week before each exam so that your needs can be addressed.

Religious Observances

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, you should notify me at least two weeks ahead of time to request special accommodation if you have a conflict. See the campus policy regarding religious observances for full details.

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the Student Code of Conduct.

Discrimination and Harassment

The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the academic integrity policy. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at the Honor Code Office website.

Course timeline

Week	Date	Reading (before class)	Lecture topic	Assignments
Week 1	Wed Jan 17, 2018	None	Statistics is for everybody (especially you). Expectations.	
Week 2	Mon Jan 22, 2018	Chapter 1: p. 1-10	Hypotheses: What do you want to know?	
	Wed Jan 24, 2018	Chapter 1: p. 10-20	Data: The raw materials for	
Week 3	Mon Jan 29, 2018	Chapter 2: p. 23-44	Displaying data: How can you summarize your data with	Problem set 1 posted
	Wed Jan 31, 2018	Chapter 2: p. 44-68	Displaying data: How can you summarize your data with	
Week 4	Mon Feb 5, 2018	Chapter 3: p. 69-80	Central tendency: How can you summarize your data with	Problem set 1 due
	Wed Feb 7, 2018	Chapter 3: p. 80-94	Distributions: How measures of central tendency succeed and	
Week 5	Mon Feb 12, 2018	Chapter 4: p. 95-106	Variability: Using numbers to describe distributions	Problem set 2 posted
	Wed Feb 14, 2018	Chapter 4: p. 106-112	Practice with measures of	
Week 6	Mon Feb 19, 2018	Chapter 5: p. 119-123	What is the normal distribution?	Problem set 2 due
	Wed Feb 21, 2018	Chapter 5: p. 123-128	How we use numbers to describe the normal	
Week 7	Mon Feb 26, 2018	Chapter 5: p. 128-132	Practice using the normal distribution	
	Wed Feb 28, 2018	Review for Midterm Exam		
Week 8	Mon Mar 5, 2018	Midterm Exam		
	Wed Mar 7, 2018	Chapter 6: 139-147	Sampling: How do we get data?	Extra credit 1 due
Week 9	Mon Mar 12, 2018	Chapter 6: 147-153	Sampling distribution of the mean: How can we ever know anything without knowing	Problem set 3 posted
	Wed Mar 14, 2018	Chapter 7: 157-160	Estimation: How sure are you?	
Week 10	Mon Mar 19, 2018	Chapter 7: 160-168	Means: How sure are you?	Problem set 3 due
	Wed Mar 21, 2018	Chapter 7: 168-173	Proportions: How sure are you?	
Spring break March 26-30				
Week 11	Mon Apr 2, 2018	Chapter 8: p. 179-183	Hypothesis testing: Are populations different or the	Problem set 4 posted
	Wed Apr 4, 2018	Chapter 8: p. 183-193	Hypothesis testing: What is a test statistic?	
Week 12	Mon Apr 9, 2018	Chapter 8: p. 193-205	Hypothesis testing: Are these means the same?	Problem set 4 due
	Wed Apr 11, 2018	Chapter 9: p. 212-222	Two variables: Making a table to see how they are related	
Week 13	Mon Apr 16, 2018	Chapter 9: p. 222-236	Two variables: Testing how they are related	Problem set 5 posted
	Wed Apr 18, 2018	Chapter 11: p. 281-290	Two variables: Making a picture to see how they are related	
Week 14	Mon Apr 23, 2018	Chapter 11: p. 290-298	Two variables: Regression	Problem set 5 due
	Wed Apr 25, 2018	Chapter 11: p. 298-308	Two variables: Correlation and the limitations of regression	
Week 15	Mon Apr 30, 2018	Chapter 10/11: TBA	Two variables: Regression and ANOVA	
	Wed May 2, 2018	Review for final exam, encouragement		Extra credit 2 due

Readings must be completed before lecture.

Extra Credit

Students will have two opportunities to earn extra credit. See below:

Extra credit 1: Select only one of the options below (20 points possible).

Option 1A: TED Talks essay

Watch Hans Rosling's TED talks on religion and fertility and HIV rates.

https://www.ted.com/talks/hans_rosling_religions_and_babies

https://www.ted.com/talks/hans_rosling_the_truth_about_hiv

Then write a 2-page (double spaced) essay describing Rosling's major causal claims in the two talks. Be sure you specify the independent and dependent variables in each of Rosling's claims you describe.

Your essay must be submitted on Canvas before **8 PM on 3/7/18**. No late extra credit will be accepted.

Option 1B: Moneyball essay

Watch the 2011 film Moneyball (directed by Bennett Miller).

Then write a 2-page (double spaced) essay reviewing the use of statistics in the film's story. Be sure you specify the independent and dependent variables employed by the film's characters.

Your essay must be submitted on Canvas before before **8 PM on 3/7/18**. No late extra credit will be accepted.

Extra credit 2: Personal essay (40 points possible)

Write a personal essay (2 – 4 pages double spaced) describing how your definition of statistics has changed over the semester. Be sure to provide your definition of statistics before the class, illustrate how you had arrived at your prior definition, describe how the course changed your definition, and specify your current definition of statistics.

If how you define statistics has not changed, you may write your essay about one way in which statistics or quantitative data have impacted your life. (Please note that this option may sound easier, but writing a good, full-credit essay of this type is much harder.) For example, you might focus on how quantification (test scores, credit scores, evidence, probability) has impacted your life. Or you might describe the relationship between statistical evidence and how you determine things to be true. Be sure to employ statistical terms correctly.

The essay will be graded on organization, grammar, narrative coherence, thoughtfulness, correct use of statistical concepts, and creativity. This short essay must be excellent to receive a full 20 points of extra credit. I encourage you to get editing help from our on-campus writing center before you submit it.

Your essay must be submitted on Canvas before **8 PM on 5/2/18**. No late extra credit will be accepted.