SOCY-2061: <u>Introduction to Social Statistics</u>

Class Time: Monday & Wednesday 10:00 – 10:50 a.m.
Class Location: GOLD Biosciences Building A2B70

Instructor: Ryan K. Masters   Teaching Assistant: Kendra Clark
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Office Hours: M & W, 11:15 – 1:00 p.m.   Office Hours: F 10:00am – noon
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Course Overview

This course is designed to introduce you to the central concepts behind quantitative investigations into sociological phenomena. The primary goal is to present the most basic statistical techniques used by researchers to estimate and test social relationships. Our hope is for you to develop skills in order to effectively measure, describe, and analyze quantitative data; infer patterns in samples to populations; and to critically assess empirical claims made by others.

By the end of the semester you should be able to:
1. Appropriately organize and describe raw data using common statistical measures
2. Estimate and interpret measures of central tendency, variability, and correlation
3. Recognize, interpret, and analyze quantitative results in the social sciences
4. Critically evaluate quantitative results presented by others
5. Perform basic but useful functions in the statistical computing program "R"

Please keep in mind that this course is designed to introduce you to the logics of social statistical analyses, not to test your mathematical skills. A fundamental familiarity with basic arithmetic and a rudimentary understanding of algebraic functions will be necessary to interpret material presented in the course (both in the text and in class) and to apply the learned techniques. That said, even if you feel insecure about your mathematical abilities introductory statistics should not intimidate you. Above all else, success in this course requires due diligence. The material in this course will be covered incrementally, with the presentation of new material building on what you learned in prior sections. This course is thereby cumulative in nature. You will have the greatest chance of success if you regularly attend class meetings, take meticulous notes, read the weekly material, and discuss material at recitations and during our office hours.

Statistical analyses in the social sciences have become ubiquitously performed with computer programs. Gone are the days of estimating by hand, bean counting, and/or clunky card-reading machines. Thus, this course has a minor OPTIONAL computational component. You will have the option to *generate* statistical output with R for extra credit, a commonly used statistical computing program that is available for free download here: https://cran.r-project.org/

Course Material:

Textbook: *Essentials of Social Statistics for a Diverse Society*, Third Edition. Anna Leon-Guerro and Chava Frankfort-Nachmias. Purchase online from the publisher, Sage (https://us.sagepub.com/en-us/nam/essentials-of-social-statistics-for-a-diverse-society/book255550) or rent/purchase online via Amazon or other retailer. The text is also available at the CU Bookstore

R Material: "Try R," a free, self-paced, online course at http://tryr.codeschool.com/ as well as http://www.cyclismo.org/tutorial/R/index.html

Online Posts: Please know that we will occasionally post additional guides, tips, & R-related material to the course website.

Course Requirements and Assessment

There will be 400 possible points in this course, broken down as follows:

Course Requirement	%	Total Points	Grading Scale
Exercise 1	3	12	376-400 = A
Exercise 2	3	12	360-375 = A-
Exercise 3	3	12	348-359 = B+
Exam 1	25	100	332-347 = B
Exercise 4	3	12	320-331 = B-
Exercise 5	3	12	308-319 = C+
Exercise 6	3	12	292-307 = C
Exam 2	25	100	280-291 = C-
Exercise 7	3	12	268-279 = D+
Exercise 8	3	12	252-267 = D
Exam 3	26	104	240-251 = D-
Final*	26	104	
Total	100	400	

*The exam component of your grade will be calculated using the THREE highest exam scores. Accordingly, the final exam is OPTIONAL. That is, if you are satisfied with your grade at the end of semester you need not take the Final Exam.

POLICIES & ACCOMMODATIONS

Accommodations

1. Appropriate academic accommodations will be provided to students with disabilities. Please contact the Disability Services office located in the Center for Community (C4C Room N20) as soon as possible to obtain documentation (303-492-8671). Email: dsinfo@colorado.edu Guidelines for addressing temporary medical conditions and/or injuries can be found at: http://www.colorado.edu/disabilityservices/students/temporarymedical-conditions

2. The University of Colorado Boulder has both legal and moral obligations to accommodate students who choose to abstain from classes and/or miss scheduled events in order to observe religious holidays. If you plan to be absent from class to observe a holiday, please notify me of any scheduling conflicts by September 5.

3. Students involved with CU Athletics shall refer to the course schedule and alert your TA or me of any scheduling conflicts at least a week before the first exam. You are also responsible for developing a plan to cover any absences.

Course Expectations and Honor Code

1. I expect academic integrity (and the university requires it!). Although I encourage students to collaborate with one another on exercises, support each other in studying, and edit each other's work, you are expected to turn in original work and complete all exams on your own. Students caught cheating will be reported to the Honor Code Council, and will also have their course grade justly penalized. Information about the Honor Code can be found at http://www.colorado.edu/policies/student-honor-code-policy

2. Every homework assignment will be collected during the first five minutes of class on the scheduled due date. All assignments turned in after this time on the same day will be punished two points. Two additional points will be deducted for every subsequent day late. The last opportunity to hand in HWs is 5pm Friday. The only exception is HW #7 (to be handed in on a Friday, 11/16). Emailed HWs are not accepted.

3. Please know that the syllabus and course schedule are not set in stone. I reserve the right to change the basic course requirements, due dates, and overall content and schedule with adequate notice to students via D2L, class announcements, and/or email.

Classroom Etiquette

Please refrain from conversing with your neighbors during class. This can be quite disruptive to fellow students around you.

Laptops are not needed in stats and are not permitted in the classroom. Exceptions may apply to those with legitimate need to assist with disability.

Turn off all cell phones before class begins. Cell phones MAY NOT be used as a calculator during class time.

You and I both have the responsibility for maintaining a professional learning environment. Those who fail to adhere to basic modicum of adult behavior may be subject to discipline. Please be courteous and sensitive to alternative perspectives, especially when dealing with topics pertaining to race, culture, religion, sexuality, political ideology, nationality, gender identity & expression, age, and disability.

Please know that the University provides me a class roster containing your picture and legal name. I will happily honor your request to remove your picture and/or address you by an alternative name if you like. Please notify me your preference(s) early in the semester.

Email Policy

Please include "2061" in the subject line of all course-related emails.

Please know that I will respond to course-related emails only during my office hours.

Respect, Discrimination, and/or Harassment

Please respect your classmates. Topics discussed in class may be interpreted as contentious by some, and I would like everyone to feel comfortable enough to freely and openly participate.

Prerequisites

This is a lower-division course and there are no prerequisites.

Fall 2018 Course Schedule

Date	Topic	Reading
8/27 – 8/29	Course Introduction & Descriptive Statistics	Syllabus, Chapter 1, Ch. 1 & 2 of Try R
9/3	***Labor Day***	**No Class**
9/5	Organizing Information	Chapter 2
9/10 – 9/12	Measures of Central Tendency	Chapter 3, Ch. 3 & 4 of Try R **9/12: Exercise #1**
9/17 – 9/19	Measures of Variability	Chapter 4 **9/19: Exercise #2**
9/24	Measures of Variability and Review	
9/26	**EXAM #1**	**All Material To Date Exercise #3**
10/1 – 10/3	Z-Scores and The Normal Curve	Chapter 5
10/8 – 10/10	Sampling	Chapter 6 **10/10: Exercise #4**
10/15 – 10/17	Estimation	Chapter 7
10/22 – 10/24	t Distribution & Testing Hypotheses	Chapter 8 **10/24: Exercise #5**
10/29	Testing Hypotheses and Review	
10/31	**EXAM #2**	**All Material to Date Exercise #6**
11/5 – 11/7	Contingency Tables	Chapter 9
11/12 – 11/14	Chi-Square Tests	Chapter 10 **11/16: Exercise #7**
11/19 – 11/21	***Thanksgiving Holiday***	**No Class**
12/3 – 12/5	Correlation and Linear Regression	Chapter 11
12/10	Linear Regression Analysis	Chapter 11 **12/10: Exercise #8**
12/12	**EXAM #3**	**All Material to Date**

The date and location for the optional Final Exam are to be determined.