

**SOCY 2061: INTRODUCTION TO SOCIAL STATISTICS
FALL 2020**

	Jason Boardman	Trent Davidson	Rivers Isaacson	Hannah Lyden	Katherine Craig
Role	Instructor	TA	TA	TA	TA
Email*	boardman@	Trent.Davidson	Rivers.Isaacson	Hannah.Lyden	katherine.craig
Hours	M,W 9:15-10:15	Tu, Fr 11-12	Fr 10:30-12	W 1-2, Th 9:30-10:30	Tu,Th 10-11

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Course Time and Synchronous Status

Instructor Name	Start	End	Day	Format
Lecture				
Boardman, Jason D	10:20 AM	11:10 AM	MW	Remote (synchronous)
Recitations				
Craig, Katherine Ann	1:50 PM	2:40 PM	W	Remote (synchronous)
Davidson, Trent	12:40 PM	1:30 PM	W	In-person
Lyden, Hannah	11:30 AM	12:20 PM	W	In-person
Davidson, Trent	8:00 AM	8:50 AM	TH	Hybrid
Isaacson, Rivers Ryan	2:20 PM	3:10 PM	TH	Hybrid
Lyden, Hannah	8:00 AM	8:50 AM	TH	Hybrid
Craig, Katherine Ann	10:20 AM	11:10 AM	F	Remote (synchronous)
Craig, Katherine Ann	4:10 PM	5:00 PM	F	Remote (synchronous)
Davidson, Trent	4:10 PM	5:00 PM	F	Remote (synchronous)
Isaacson, Rivers Ryan	9:10 AM	10:00 AM	F	Remote (synchronous)
Isaacson, Rivers Ryan	4:10 PM	5:00 PM	F	Remote (synchronous)
Lyden, Hannah	8:00 AM	8:50 AM	F	In-person

Requirements for COVID-19

As a matter of public health and safety due to the pandemic, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements, and public health orders in place to reduce the risk of spreading infectious disease. Required safety measures at CU Boulder relevant to the classroom setting include: (1) maintain 6-foot distancing when possible; (2) wear a cloth face covering (over nose and mouth), especially when unable to maintain a distance of at least 12 feet; (3) clean local work area; (4) practice hand hygiene; (5) follow public health orders; (6) if sick you are sick and you live off campus, do not come onto campus (unless instructed by a CU Healthcare professional); (7) if sick you are sick and you live on-campus, please alert CU Boulder Medical Services. Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policies on COVID-19 Health and Safety and classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please see the "Accommodation for Disabilities" statement on this syllabus. Before returning to campus, all students must complete the COVID-19 Student Health and Expectations Course. Before coming on to campus each day, all students are required to complete a Daily Health Form. Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home and complete the Health Questionnaire and Illness Reporting Form remotely. In this class, if you are sick or quarantined, please contact the instructor and your teaching assistant so that we are able to make the appropriate accommodations.

Required Texts

Leon-Guerro, A. & Frankfort-Nachmias, C. 2018. *Essentials of Social Statistics for a Diverse Society*, 3rd edition. Los Angeles, Sage.
Companion website: <https://edge.sagepub.com/ssdsess3e>
Gaubatz, KT. 2015. *A Survivor's Guide to R: An Introduction for the Uninitiated and the Unnerved*, Los Angeles, Sage. Companion website: <http://kktg.net/sgr/>

Course Description

A significant amount of sociological research uses quantitative methods (e.g., statistical analyses) to investigate social phenomena. These researchers use large national surveys, public opinion polls, and census data to document, describe, and explain a wide range of sociologically motivated research questions. As students of this body of research, it is important to have a basic understanding of statistics if one is to be an active participant in the local, regional, national, and international dialog within the sociological community. The primary goal of this class is to provide each student with the requisite skills to not only understand the mainstream sociological research but also to be critical consumers of statistical information that is often presented as “factual”. Although the primary emphasis is on social research, the information and skills that you will learn in this class will be applicable to most academic and non-academic careers. The course is divided into three sections that focus on descriptive statistics and inferential Statistics and various applied statistical techniques. Descriptive statistics are methods that allow you to present a set of scores in a parsimonious summary form that measure individual and social characteristics (e.g., socioeconomic status, self-esteem, residential segregation). The primary concepts that we emphasize are *central tendency* (e.g., mean, mode, median) and *dispersion* (e.g., standard deviation, variance, inter-quartile range). Inferential Statistics is the backbone of statistical reasoning and it involves making estimates about a *population* (e.g., the entire country) based on a *sample* (e.g., a random selection of people from the country). This process necessarily involves the invocation of the basic rules of probability and it will introduce you to hypothesis testing which is used throughout the physical, behavioral, and social sciences. We will also cover bivariate and multivariate statistical techniques in great detail and you will have an opportunity to examine data using the statistical software R. We will use data from the 2018 General Social Survey that is described in detail here: <https://gss.norc.oregon.edu/get-documentation>

Course Material

All lectures, homework assignments, and other materials are posted Canvas: <https://canvas.colorado.edu/courses/64585>

Course Requirements

Participation (10%): Attendance in lecture and recitation section is mandatory. Any changes in the course or announcements will be made in class and students are responsible for this information. Your participation grade includes your attendance in lecture and recitation as well as your performance on in-class activities and small quizzes in both settings.

Examinations (50%): There are three synchronous examinations (see schedule below). Each examination is cumulative. Any missed examination will result in a score of 0 and make-up examinations will be given only in the case of a documented emergency. All examinations will count the same toward your overall grade. The third examination will be held during the final examination time but is still designed to be a 50 minute test. All exams will be administered and graded through the course Canvas page. Examinations are administered on the following days:

Exam 1: Monday, September 21st (10:20a-11:10a)

Exam 2: Monday, October 26th (10:20a-11:10a)

Exam 3: Wednesday, December 9 (1:30p-4:00p)

Homework (40%): There are 7 homework assignments in the class. Late homework will only be accepted in the case of a documented emergency. All homework is posted to the course Canvas page and you will submit your answers through the Canvas page as well.

Homework 1: Wednesday, September 9th (10:00 am)

Homework 2: Monday, September 21st (10:00 am)

Homework 3: Monday, October 5th (10:00 am)

Homework 4: Monday, October 19th (10:00 am)

Homework 5: Monday, October 26th (10:00 am)

Homework 6: Monday, November 9th (10:00 am)

Homework 7: Wednesday, December 9th (12:00 pm)

Religious Holidays

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, please contact Professor Boardman via email to make arrangements. See the [campus policy regarding religious observances](#) for full details.

Communications

Email is an official form of communication. You are responsible for checking your University of Colorado official email address on a regular basis. **To send me an email, you must use SOCY2061 as the subject of your email (NO SPACE).** This can be followed by whatever subject you'd like (e.g. SOCY2061 homework 3) but your message must start with SOCY2061. I will read and respond to email sent to me from this class during my office hours. I will not respond to email otherwise. Lectures and other handouts will be made available online. During lecture, you may ask questions using the 'chat' feature on Canvas.

Policies for Students with Special Needs

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. 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.

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](#). **Please turn off your cell phone when you enter the class.** In addition, we will use our laptops in most lectures, please only have the lecture notes and your statistical program R open on your machine. **Please do not use any other programs, check email, browse the web, etc. It is distracting to you and those around you.**

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct intimate partner abuse (including dating or domestic violence), stalking, protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#). Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the Honor Code Office website.

SECTION 1: DESCRIPTIVE STATISTICS

Week 1 (Aug 24 – Aug 26)	<i>Introduction to data, statistics, and R</i>	Read: LG Ch. 1, TG Ch. 1-2
Week 2 (Aug 31 – Sept 2)	<i>Graphic presentation of data</i>	Read: LG Ch. 2, TG Ch. 12

Homework 1: Due 10:00 am, Wednesday, September 9th

Week 3 (Sept 9)	<i>Central Tendency</i>	Read: LG Ch. 3, TG Ch. 5
Week 4 (Sept 14 – Sept 16)	<i>Dispersion</i>	Read: LG Ch. 4, TG pg. 30

Homework 2: Due 10:00 am, Monday, September 21st

Examination 1: Monday, September 21st

SECTION 2: INFERENCE STATISTICS

Week 5 (Sept 23)	<i>The normal distribution</i>	Read: LG Ch. 5, TG Ch. 4
Week 6 (Sept 28 – Sept 30)	<i>Sampling and sampling distributions</i>	Read: LG Ch. 6

Homework 3: Due 10:00 am Monday, October 5th

Week 7: (Oct 5 – Oct 7)	<i>Estimation and confidence intervals</i>	Read: LG Ch. 7
Week 8 (Oct 12 – Oct 14)	<i>Hypothesis Testing</i>	Read: LG Ch. 8

Homework 4: Due 10:00 am Monday, October 19th

Week 9 (Oct 19 – Oct 21)	<i>Hypothesis Testing Difference in Groups</i>	Read: LG Ch. 8, TG pp. 32-34; 421-424
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Homework 5: Due 10:00 am, Monday, October 26th

Examination 2: Monday, October 26th

SECTION 3: BIVARIATE STATISTICS

Week 10: (Oct 28)	<i>Chi square test of independence</i>	Read: LG Ch. 9, TG pp. 125-126, 425-426
Week 11 (Nov 2 – Nov 4)	<i>Analysis of Variance (ANOVA)</i>	Read: LG Ch. 10, TG pp. 427-428

Homework 6: Due 10:20am Monday, November 9th

Week 12: (Nov 9 – Nov 11)	<i>Correlation</i>	Read: LG Ch. 11 next 3 weeks, TG pp. 417-421
Week 13 (Nov 16 – Nov 18)	<i>Bivariate regression</i>	Read: LG Ch. 11, TG pp. 428-432
Week 14 (Nov 23 – Nov 25)	<i>Bivariate and multivariate regression</i>	Read: LG Ch. 11
Week 15: (Nov 30 – Dec 2)	<i>Multivariate regression and review</i>	Read: LG Ch. 11
Last Class: (Dec 7)	<i>Review</i>	

Homework 7: Due 12:00pm, December 9th

Examination #3 – Wednesday December 9th 1:30pm-4:00pm
