



SOC 3112-001 Social Statistics

Department of Sociology

Spring Semester 2023

Tuesdays and Thursdays

10:45AM-12:05PM; BEH110

Instructor: Jared Sanborn

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Office Hours: by Appointment

Credit Hours: 4

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COURSE DESCRIPTION

COURSE SUMMARY

Designed for the math-minded and math-phobic alike, this course will introduce students to the fundamentals of statistics and their use in the social sciences. It is important to note that emphasis will be placed on the conceptual underpinnings of statistics. Thus, advanced algebra may be helpful, but only basic math is necessary for your success in the course. We will study a wide variety of subjects this semester related (but not necessarily limited to) a.) the importance and language of statistics; b.) tabular and graphical “descriptive statistics” summarizing groups of data; and c.) “probability distributions” linking outcomes to their likelihood of occurrence; and d.) “hypothesis testing” evaluating the existence of a significant relationship between social factors.

Successful completion of SOC 3112 will satisfy the following University of Utah general education requirement: Quantitative Reasoning B (**QB**), as well as the following bachelor’s degree requirement: the BS Quantitative Intensive (**QI**) requirement. This course will address the following approved learning outcomes: Inquiry & Analysis, Quantitative Literacy, Information Literacy, and Foundations for Lifelong Learning.

In fulfillment of the **QB-Quantitative Reasoning & QI-Quantitative Intensive**, the course involves the calculation and interpretation of social statistics. Specifically, this class is designed so that students:



- Develop a critical understanding of the source, validity, and production of quantitative data.
- Understand the basic concepts and formulas of statistical methods used in sociology.
- Learn to perform the basic statistical procedures expected of undergraduate sociology students.
- Develop a sufficient understanding of statistics for the student to become an informed reader of statistical analyses.

COURSE OBJECTIVES

By the end of this course, students will be able to:

- comprehend the fundamental rules of probability
- apply learning to calculate a variety of basic descriptive and inferential statistics
- synthesize knowledge of various techniques in order to assess whether a statistic was appropriately chosen, calculated and interpreted
- educate others about why statistical literacy is important

REQUIRED MATERIALS

The required text for this course is the interactive version of **Statistics for People Who (Think They) Hate Statistics (7th edition) by Neil J. Salkind**. This will be made available through the University's Digital Inclusive Access (IA) Program. The text, and accompanying study guide, is available on the first day of class via Canvas. The IA fee is added to course tuition, eliminating the out-of-pocket expense. There are several points at which you can choose to opt out of the IA program, but please note that the print (or even e-book) version is more expensive (and lacks many of the features) of the interactive version via IA.

To access the textbook, please use the '**Bookshelf**' tab in the Canvas navigation pane. This will bring you to an external website, VitalSource, where you can click on 'Read Now'. Please note that although there is a price listed for the Interactive text (as well as the associated Study Guide), you do not have to pay in order to "open" the book; the fee will be/has already been charged automatically to your student account unless you elect to opt out.

If you have trouble accessing the book in Canvas, please contact Clayton (The TA for this course), who can refer you to technical assistance if necessary.

In addition to the textbook, you will also need a calculator (or phone application) with a square root function.

Finally, you will need to install Microsoft Excel on your home computer with the ability to conduct data analysis.



Additionally, if you would really like to use SPSS instead of Excel, please send Jared an email to get more information about how to do this. There still may be quiz questions asking for your excel formulas so you will still need to learn Excel.

TEACHING AND LEARNING METHODS

This class is discussion and application based. We will have lectures, discussions, and quantitative applications. Lectures are designed to inform you of the history, uses, and methods of statistical analysis while offering connections to concepts and experiences that may be familiar to you. Questions are always encouraged during lectures.

COURSE POLICIES

Attendance and punctuality: You are expected to attend each class. Please be on time to class, but if you are late, please just be respectful when entering the classroom. Sneaking in a few minutes late is one thing, doing so with your headphones still on so we can all hear your music is another. If you would like for all of us to hear a song that badly, please suggest it to us at an appropriate time.

Food and Drink: A water bottle or similar is acceptable, otherwise please do your best to refrain from eating in class. This class is right around when many people regularly eat lunch, so I understand that you may get hungry during class. If you do need to eat during class, please bring something that is not audibly or olfactorily distracting. If you bring Pop Rocks® or Lutefisk into class you may be asked to put it away or leave class if your food is distracting others. **If you have any severe food allergies that may restrict what others can eat in this room, please let me know immediately.**

Electronic devices in class: Laptops are acceptable for the purposes of notetaking and reviewing spreadsheets.

Other communication devices are not allowed. If you must make or receive a phone call, please exit the classroom. Pagers, radios, semaphore flags, telegraphs, and signal lamps are prohibited. Two cups with string tied between them may be used with prior approval.

If the class is engaged in a discussion and you wish to use a smart phone to look up information pertinent to the discussion that is also okay, but if you have your phone out for extended periods of time, I may ask you to stand and report your findings to the class or put your phone away.

Canvas: The canvas page for this class will be the central hub for all class materials. This is where you will turn in all assignments. Any changes made to the syllabus or schedule will be posted on canvas as an announcement. If there is an updated document that accompanies the



change it will also be on canvas. I suggest you make sure that you receive notifications from Canvas somewhere you will see them, so you do not miss any class information.

Late Work: Unless you have prior approval for turning in an assignment late, Late work will be Penalized 3% per day down to a minimum of 61%. This is a pretty generous late policy but please do not take advantage of it. This class builds on itself so if you get behind on some assignments it can snowball. If you feel overwhelmed please contact Jared as soon as possible.

If you turn in an assignment shortly after the deadline, please ask me to override the automated late penalty. I know many of you will procrastinate and work right up to the wire, and while I do not think this is a great strategy, I would prefer you take your time on an assignment and turn it in slightly late rather than rush just to beat the deadline.

COURSE STRUCTURE AND ASSIGNMENTS

This course is separated into modules, most modules will be one week, and for the most part each module will align with one chapter from the textbook.

Quizzes: Each week there will be one quiz which you will take on canvas, with the exception of weeks when there is an exam. Quizzes are:

- designed to evaluate your **comprehension** of the material introduced via readings and lectures
- accessible via the 'Assignments' section in a given Canvas module
- comprised of 25 multiple-choice questions
- graded on a scale of 1-25

Labs: There are labs for important concepts, and are not assigned after each chapter like the quizzes. Labs are:

- designed to evaluate your **application** of concepts introduced via readings and lectures
- accessible via the 'Assignments' section in a given Canvas module
- The lab section of this course is designed to teach you to use Excel for basic data analysis.

Exams: There is **one non-cumulative exam for each of the course's three sections**, for a total of three exams (see 'Schedule' below). **The Salkind Study Guide, which was negotiated into your inclusive access package at no cost to you, provides ample opportunity to review and practice the material upon which you be examined.** Please familiarize yourself with this resource (also available through the Canvas Bookshelf tab. Exams are:



- designed to evaluate your **synthesis of** material introduced via readings and lectures
- accessible via the appropriate Canvas module
- comprised of roughly 10 multiple-choice, 10 true/false and 10 short-answer questions
- graded on a scale of 1-30 points
- available within the Canvas exam assignment, along with completion instructions/suggestions
- designed to be taken with support from the Lecture slides and the Salkind textbook, which was negotiated into your inclusive access package at no cost to you to ensure that your online exam experience involves ample opportunity to review and practice the material upon which you be examined.

Final Presentation

There is **one final presentation** for the course. The final assignment is:

- designed to evaluate your ability to **educate others** about why statistical literacy is important
- comprised of a roughly **10 minute digital presentation** including slides and commentary
- graded on a scale of 1-50 points (see rubric in 'Assignments' section in the 'Finals Week' Canvas module)
- to be uploaded to Canvas on or before the end of the final exam period for the course
- graded using rubric and instructions/suggestions available within the 'Final Week' Canvas module

A Note on Due Dates: Quizzes and Labs (when assigned) will be due at 11:59pm on Sundays following the week we completed the relevant material. That is: when we complete material during a Thursday class the relevant quiz will be due on the Sunday three days later. The midnight cutoff is helpful for keeping track of due dates, but my own experience as a student (which is backed up by recent research) is that students do not get enough sleep. If you have not completed an assignment and need to sleep, prioritize your sleep. Email the class TA on Monday morning after you have completed the assignment. If you need longer than noon on Monday please include your intended due date for the assignment.



GRADING POLICY

Your final grade will be calculated based on the following weighting using the University of Utah's grading scale:

| | | | | | |
|---------------------|------|-----------|----|-----------|----|
| Quizzes: | 30% | 100%-94%: | A | 76.9%-74% | C |
| Labs: | 20% | 93.9%-90% | A- | 73.9%-70% | C- |
| Exams: | 30% | 89.9%-87% | B+ | 69.9%-67% | D+ |
| Final Presentation: | 20% | 86.9%-84% | B | 66.9%-64% | D |
| Total: | 100% | 83.9%-80% | B- | 63.9%-60% | D- |
| | | 79.9%-77% | C+ | 59.9%-0% | E |

Additional Resources:

University Counselling Center: The Counselling Center provides developmental, preventive, and therapeutic services and programs that promote the intellectual, emotional, cultural, and social development of University of Utah students. The Counseling Centers provides individual, group, and couples therapy, as well as workshops, and mindfulness programs. Most of these services are free for degree-seeking students and can be very beneficial whether you feel like you are struggling or not. Start by scheduling an intake appointment by calling **801-581-6826**, this appointment will allow you to talk with someone at the Counselling Center about what services would be most useful for you. Currently this is the only way to receive an intake appointment. **The counselling center is open from 8am to 6pm Monday through Friday. It is located on the fourth floor of the student services building.**



Institutional Policies

All students and instructors are expected to adhere to the following university policies:

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

Accommodation Policy (see Section Q): <http://regulations.utah.edu/academics/6-100.php>

The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message.

For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu (Links to an external site.).

Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Students may drop a course within the first two weeks of a given semester without any penalties. Students may officially withdraw (W) from a class or all classes after the drop deadline through the midpoint of a course. A "W" grade is recorded on the transcript and appropriate tuition/fees are assessed. The grade "W" is not used in calculating the student's GPA. See the [Academic Calendar](#) for the last day to withdraw from term, first and second session classes.

Deadlines for courses with irregular start and end dates policy:

<https://registrar.utah.edu/handbook/miscellaneous.php>

It is assumed that all work submitted to your instructor is your own work. When you have used ideas of others, you must properly indicate that you have done so. Plagiarism and cheating are serious offenses and may be punished by failure on an individual assignment, and/or failure in the course. Academic misconduct, according to the University of Utah Student Code, *"includes, but is not limited to, cheating, misrepresenting one's work, inappropriately collaborating, plagiarism, and fabrication or falsification of information...It also includes facilitating academic misconduct by intentionally helping or attempting to help another to commit an act of academic misconduct."*

For detailed definitions and possible sanctions, see the Student Code:

<http://regulations.utah.edu/academics/6-400.php>



Your personal health and wellness are essential to your success as a student. Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive in this course and at the University of Utah. Please speak with the instructor or TA before issues become problems.

For helpful resources, contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

The Veterans Support Center is a "one stop shop" for student veterans to find services, support, advocacy, and camaraderie. They are located in the Park Building Room 201.

You can visit their website for more information about their services and support at:
<http://veteranscenter.utah.edu>

The University of Utah has an LGBT Resource Center on campus. They are located in Room 409 of the Olpin Union Building. Hours: M-F 8-5pm.

You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: <http://lgbt.utah.edu>.

If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development.

These resources include:

Writing Center (<http://writingcenter.utah.edu>)

Writing Program (<http://writing-program.utah.edu>)

English Language Institute (<http://continue.utah.edu/eli>)

About the U

As the only institution in the state classified in the highest research category (R1), at the University of Utah you will have access to state-of-the-art research facilities and be able to be part of the knowledge creation process. You will have the opportunity to do research of your own with faculty who are leading experts in their field, engaging in programs that match your research interests. Further, you will interact with and often take classes with graduate students that provide an advanced understanding of the knowledge in your field.

CSBS Emergency Action Plan

Not every online student comes to campus, but some do. Familiarize yourself with the [CSBS Emergency Action Plan](#) before you come to campus.

Syllabus Changes

This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be posted to Canvas under Announcements.

Course Schedule:

| Day | | Week | Module |
|----------|-----------|------|---|
| Tuesday | 1/10/2022 | 1 | Chapter 1 - Statistics or Sadistics? It's Up To You |
| Thursday | 1/12/2022 | | |
| Tuesday | 1/17/2022 | 2 | Chapter 3 - Computing and Understanding Averages: Means to and End |
| Thursday | 1/19/2022 | | |
| Tuesday | 1/24/2022 | 3 | Chapter 4 - Understanding Variability: Vivé La Différence |
| Thursday | 1/26/2022 | | |
| Tuesday | 1/31/2022 | 4 | Chapter 5 - Creating Graphs: A Picture Really is Worth a Thousand Words |
| Thursday | 2/2/2022 | | |
| Tuesday | 2/7/2022 | 5 | Exam 1 - Fundamentals |
| Thursday | 2/9/2022 | | |
| Tuesday | 2/14/2022 | 6 | Chapter 6 - Computing Correlation Coefficients: Ice Cream and Crime |
| Thursday | 2/16/2022 | | |
| Tuesday | 2/21/2022 | 7 | Chapter 7 - An Introduction to Understanding Reliability and Validity: Just the Truth |
| Thursday | 2/23/2022 | | |
| Tuesday | 2/28/2022 | 8 | Catch Up & Tangential Topics |
| Thursday | 3/2/2022 | | |
| Tuesday | 3/7/2022 | 9 | Spring Break |
| Thursday | 3/9/2022 | | |
| Tuesday | 3/14/2022 | 10 | Chapter 8 - Hypotheticals and You: Testing Your Questions |
| Thursday | 3/16/2022 | | |
| Tuesday | 3/21/2022 | 11 | Chapter 9 - Probability and Why It Counts: Fun With a Bell-Shaped Curve |
| Thursday | 3/23/2022 | | |
| Tuesday | 3/28/2022 | 12 | Exam 2 - Key Concepts |
| Thursday | 3/30/2022 | | |
| Tuesday | 4/4/2022 | 13 | Chapter 10 - Significantly Significant: What It Means For You and Me |
| Thursday | 4/6/2022 | | |
| Tuesday | 4/11/2022 | 14 | Chapter 11 - The One-Sample Z Test: Only The Lonely |
| Thursday | 4/13/2022 | | |
| Tuesday | 4/18/2022 | 15 | Chapters 12: T(ea) for Two Tests between the Means of Different Groups |
| Thursday | 4/20/2022 | | |
| Tuesday | 4/25/2022 | 16 | Exam 3 - Statistical Inference* |
| Thursday | 4/27/2022 | | |