This course introduces the basic concepts of data analysis and statistical computing, both of which are widely used in the social sciences. Specifically, this class emphasizes the practical application of quantitative reasoning, data visualization, and data analysis. The goal is to provide students with pragmatic tools for assessing statistical claims and conducting their own basic statistical analyses. Topics covered include basic descriptive measures, measures of association, hypothesis testing, estimation, and simple linear regression. Assignments are based on real-world data and problems in a wide range of fields in the social sciences and humanities, including psychology, sociology, education, and public health.

### Course Objectives

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

- Develop a critical understanding of the sources, validity, and production of quantitative data.
- Understand the basic concepts and formulas of statistical methods necessary to become an informed reader of statistical analyses and an informed consumer of research.
- Learn to perform the basic statistical procedures expected of undergraduate students in the behavioral sciences.

### Required Materials

In order to succeed in this course, you will need:

- A calculator capable of performing exponents and square roots (i.e., pretty much every calculator ever). If you have a smartphone, you're probably all set.
• Access to a computer. It doesn’t have to be anything fancy, but it must have Internet access and a browser that jibes with both Canvas and the CSBS Virtual Lab (Google Chrome is generally preferred).

• There is no required text for this course.

A Note on the Course Schedule

You may have noticed that this syllabus does not end with a calendar in which the due dates of all of your assignments and whatnot are listed in meticulous detail. This omission is by design. I am a proponent of a pedagogical strategy known as adaptive teaching, which posits that students learn more effectively when teachers are willing and able to adapt their curriculum to the needs of the class. The upside to this approach is that I am committed to updating my course materials to reflect your interests, preferences, and/or level of understanding. The downside, however, is that I am unable to plan more than a week or two in advance. In other words, it’s impossible for me to plan for Week 9 without first seeing how the class handles Weeks 1 - 8. If the idea of adaptive teaching strikes you as absurd, or if you are the type of student who needs to know exactly what will be expected of you on, say, November 17, 2021, you should seriously consider enrolling a different section of the course.

Online Course Expectations

As is the case with in-person learning, a productive online class requires all parties involved to commit to a set of shared goals and to do their part in achieving such goals. My conception of our respective roles in this collaborative endeavor is as follows:

Instructor Expectations

Your instructor (i.e., me) is committed to the following:

• The instructor will design the course to include readings, example videos, and assignments that will A) challenge you and B) provide you with opportunities to learn and practice course content.

• The instructor will be open to the possibility of modifying course content in accordance with the needs and preferences of the class.

• The instructor will communicate regularly with the class via announcements, virtual office hours, email, and feedback on assignments.

• As necessary, the instructor will hold live review and/or Q & A sessions via Zoom to ensure the students understand key course concepts.

• The instructor will provide feedback on the assignments in a timely manner.

Student Expectations

The following is expected of all students in this class:
• Students will log into Canvas regularly in order to remain up-to-date on any changes to the course schedule, assignment due dates, etc.
• Students will be proactive in resolving technology-related issues before such issues begin to affect their performance in the class.
• Students will keep up and plan ahead—procrastination and statistics simply do not mix.
• Students will make any requests for additional help, clarification, or due date extensions at least 24 hours prior to any relevant due dates or deadlines.
• Students are expected to follow the core rules of netiquette at all times while participating in the class, interacting with other students, and communicating with the course instructor and teaching assistants.
• Students will adhere to the standards of academic conduct outlined in the University of Utah Student Code of Rights and Responsibilities. Failure to do so could result in your failing a specific assignment, failing the course entirely, and/or expulsion from the University.

**Evaluation & Grading**

Your grade in this class will be based on the following: exams (60 percent), homework (15 percent), labs (15 percent), and online discussions (10 percent). There is no extra credit available, but I generally tend to round up.

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>100%-94%</td>
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<tr>
<td>A-</td>
<td>93.9%-90%</td>
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<td>B+</td>
<td>89.9%-87%</td>
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<td>83.9%-80%</td>
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**Assignments**

**Exams**
There will be three, non-cumulative exams over the course of the semester. Each exam will consist of a combination of multiple choice, short answer questions, and calculations and will cover concepts addressed in class and in assigned readings. Each exam will be worth approximately 20 percent of your final grade.
**Homework/Quizzes**
There will be more-or-less weekly homework assignments, the purpose of which is to prepare you for the abovementioned exams. These homework assignments will appear in Canvas as "quizzes," but that's only because the software literally won't let me call them anything else; I'll probably end up using the two terms interchangeably throughout the semester. You will have two opportunities to complete each homework assignment, the idea being that you will take a close look at the questions you missed the first time around and fix them the second time through.

**Labs**
The lab section of this course is designed to teach you to use a data analysis software package called SPSS. Admittedly, an online stats class is not the ideal environment for learning a program like SPSS, but doing so is a surprisingly worthwhile endeavor, if only because "familiar with SPSS" is the sort of hard skill that looks great on a resume. Anyhow, there will be approximately seven labs over the course of the semester; detailed instructions and grading criteria will accompany each.

**Discussions**
Discussions are interactive assignments wherein you discuss with other students the application and implications of population concepts and issues. Most discussions require both a post and a response, so I recommend that you don't wait until the day the discussion is due to complete it.

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**Course Policies**

**What weird, idiosyncratic policies do you have as an instructor?**

I'm so glad you asked! Here's what you need to be aware of:

- **Generally Speaking...**
  - I am aware that my class is not the center of your personal universe, just as I am aware that your busy lives will occasionally restrict your ability to participate fully therein. It is your responsibility, however, to inform me of any challenges you are facing. In general, you are expected to speak with me ASAP if there is any issue or concern that may impede your ability to complete the requirements of the course. Furthermore, the question of whether a given issue is of sufficient gravity to warrant special consideration (i.e., an extension of due dates, etc.) is left entirely to my discretion. A death in the family almost certainly qualifies; a really bad hangnail does not.

- **Communication**
I do my absolute best to respond to emails within 24 hours, though additional time may be required if your query requires considerable thought and/or a lengthy explanation. Or if you email me on a Friday night.

With the previous point in mind, I do not respond to emails within 24 hours of exam or assignment due dates. Any questions or requests for clarification should be made well in advance. In other words, you can be the kind of student who requires a lot of help from the instructor (and that’s totally fine), or you can be the kind of student who leaves everything until the last minute (and that’s also fine), but you cannot be both simultaneously.

Also, lately, I’ve been making an effort to only respond to student emails when I’m in a good mood, which means that you might have to wait a little bit longer for a response than you might like (depending on how my week is going, naturally). The upside, however, is that I’ll be much more likely to give you what you want.

- **Grading**

  Given the number of multiple-choice questions you’ll be expected to answer this semester, it is inevitable that you will come across one or two that you consider unfair, unclear, or poorly worded. Be advised, however, that I will only award credit for such questions if my post-quiz statistical analyses (specifically, overall response patterns and the extent to which said patterns are predictive of overall quiz/assignment scores) offer statistical evidence of bias. Run-of-the-mill issues (i.e., forgetting to answer a question or accidentally hitting the “Submit” button due to an inopportune sneeze) do not meet this standard.

  Also, if you’d like to contest a question, which is your right, please wait until AFTER the complete correct answers have been posted, as there just might be an accompanying explanation that resolves your issue.

- **Late Work**

  I do not accept late work without prior approval, though I’m generally pretty generous in giving out prior approval.

  Seriously, if there’s even the tiniest chance that travel, work, or a project for another class might cause you to miss a deadline, please let me know BEFORE the deadline has passed, and I will almost always give you an extra day or three. If you don’t contact me beforehand, you will be at the mercy of my ironclad "NO LATE WORK" policy.

  In the event that a Canvas malfunction prevents you from submitting your assignment on time, you must document the malfunction by (1) taking a screenshot of whatever error message(s) you received, AND (2) CC-ing me on an email to Canvas support. The email must be sent prior to the due date. If you fail to do either, you will not have the opportunity to make up the assignment.
All assignment deadlines are posted in Mountain Time. If you happen to be one of the lucky students who is taking this course from outside this picturesque if sparsely populated part of the world, it is your responsibility to make whatever adjustments are necessary to ensure your assignments are submitted prior to 11:59 PM in Salt Lake City. "...But it was only 5:00 PM on the Johnston Atoll..." is not a valid excuse for failing to submit an assignment on time.

**Incomplete Grades**

- Incomplete ("I") grades will be given only in the most extraordinary of circumstances, and it is left entirely to my discretion to determine whether or not a given student’s situation meets that standard.
- Upon receipt of an "I" grade, it is your responsibility to prepare a completion schedule outlining the date(s) by which you intend to complete your remaining assignment(s). Failure to adhere to these self-imposed deadlines may result in your failing the course.

**Other Stuff**

- All assignments and exams must be picked up within six weeks of the end of the semester. After six weeks, any student submissions that have not been claimed will be shredded and subsequently recycled.
- I reserve the right to amend this document at any time and for any reason.

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**Institutional Polices & Procedures**

1. **The Americans with Disabilities Act.** 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 & Access, 162 Olpin Union Building, (801) 581-5020. CDA 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 & Access.
   a. **Accommodation Policy (see Section Q):**
      [http://regulations.utah.edu/academics/6-100.php](http://regulations.utah.edu/academics/6-100.php)

2. **Addressing Sexual Misconduct.** 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, 328 SSB, 801-581-7779 or email at advocate@sa.utah.edu. To report to the police, contact the Department of Public Safety, 801-585-2677 (COPS).

3. **Drop/Withdrawal.** 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.
   a. **Deadlines for courses with irregular start and end dates policy.**
   https://registrar.utah.edu/handbook/miscellaneous.php

4. **Plagiarism/Cheating.** 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, improperly 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 please see the Student Code below.
   http://regulations.utah.edu/academics/6-400.php

5. **Wellness Statement.** 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 success and thrive in this course and at the University of Utah. Please speak with the instructor or TA before issues become problems. And, for helpful resources, contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

6. **Veterans Support Center.** 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.

7. **LGBT Resource Center.** 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.

8. **Learners of English as an Additional/Second Language.** 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: the Writing Center (http://writingcenter.utah.edu); the Writing Program
9. Please let us know if there is any additional support you would like to discuss for this class.

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**

**BUILDING EVACUATION**

EAP (Emergency Assembly Point) – When you receive a notification to evacuate the building either by campus text alert system or by building fire alarm, please follow your instructor in an orderly fashion to the EAP marked on the map below. Once everyone is at the EAP, you will receive further instructions from Emergency Management personnel. You can also look up the EAP for any building you may be in on campus at [http://emergencymanagement.utah.edu/eap](http://emergencymanagement.utah.edu/eap).
CAMPUS RESOURCES

U Heads Up App: There’s an app for that. Download the app on your smartphone at http://alert.utah.edu/headsup to access the following resources:

- **Emergency Response Guide:** Provides instructions on how to handle any type of emergency, such as earthquake, utility failure, fire, active shooter, etc. Flip charts with this information are also available around campus.

- **See Something, Say Something:** Report unsafe or hazardous conditions on campus if you see a life threatening or emergency situation, please call 911!

- **Safety Escorts:** For students who are on campus at night or passed business hours and would like an escort to your care, please call 801-585-2677. You can call 24/7 and a security officer will be sent to walk with you or give you a ride to your desired on-campus location.