

SOC1100: Introductory Statistics for Social Research

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Term: Spring 2026

Instructor: Han Zhang, PhD

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Office Hours: Tue/Thu, 10:15–11:15 AM

Class Hours: Tue/Thu, 1:00–2:20 PM

Office Room: Watson 242

Class Room: Salomon Center 001

Teaching assistants

Macy Brammer

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Course Website

Canvas: <https://canvas.brown.edu/>

Canvas will be used for lecture slides, assignments, announcements, and grading.

Course Overview

This course introduces social scientific data analysis with an emphasis on descriptive and inferential statistics. Topics include sampling, probability, hypothesis testing, statistical inference, measures of association, regression, and the use of Stata. No prior statistics experience is required.

Course objectives

By the end of the course, students should be able to:

1. Formulate statistical questions
2. Select appropriate statistical techniques
3. Interpret statistical results accurately
4. Conduct independent statistical research
5. Critically evaluate statistical claims in research and media

General expectations

- Be kind and patient with yourself and others in this class. We are living in what can be easily classified as stressful times. We must extend empathy to others whenever possible.
- In-person attendance for class meetings is mandatory and expected. If extenuating circumstances (e.g., illness or emergency) prevent you from attending class, you are expected to get notes from a classmate to figure out what you missed.
- That said, your health and well-being take priority. If you are sick or otherwise unwell, please take care of yourself. Also, to protect your classmates (and instructors), please do not come to class if you are ill. If you are unable to keep up with class work, email your course TA and cc Professor Zhang so that we can make a plan.
- Students are expected to arrive to class on time. When in class, students are expected to actively engage with the lecture and participate in class discussions and activities. We ask that you minimize any activities that might be distracting to the instructor or to others in the class (including using electronic devices for anything not related to the class).
- In general, you should plan to spend roughly 10 hours per week on this course. This includes attending lectures and section meetings, reading and synthesizing materials for the week, and completing any assignments.
- Check your email account daily.
- Check the course Canvas page before every class meeting.

Sections

This course includes weekly sections, which provide an opportunity to learn Stata, review material, and ask your TA questions about homework and anything else. Your participation in sections is expected (attendance will be taken).

A Note about Email

Please try to ask questions during class, before or after class meetings, and during office hours. This is often the easiest and most efficient way to get your questions answered. If these options fail to answer your question or are for whatever reason not possible, email your section TA and cc Professor Zhang. In general, we will do our best to respond to all emails within 48 hours, but please be patient, as we receive many emails. We may take longer to respond if you email us over the weekend or during a break.

Evaluation and Grading

Your final grade in this course will reflect:

1. Five problem sets (5% each = 25% of final grade). Problem sets are due on Canvas by the due dates listed in the course schedule.
2. Three non-cumulative exams (20% each = 60% of final grade). Exams will involve a combination of multiple-choice questions, problems to solve, and interpretation of results. Exams are in person and take place during class time. Exams may be rescheduled only with appropriate documentation (e.g., from Health Services or a Dean). Students with health-related problems or emergencies should contact me as soon as possible to discuss accommodations. Electronic devices are not permitted during exams, except for a calculator when allowed.
3. In-class quizzes (2% each = 10% of final grade). Six times throughout the semester, we will have **in-person, unannounced** quizzes during lecture time. Quizzes will be brief and will consist of one or more binary-choice question(s). Quizzes will be graded on a 0–2 scale (0 = did not complete the quiz; 2 = quiz completed). You will be graded based on whether you completed the quiz (or not) and not on whether you answered the question correctly. In calculating final grades, we will drop your lowest quiz score (so that only 5 quizzes count). No make-up quizzes will be permitted. Electronic devices are not permitted during quizzes, except for a calculator when allowed.
4. Participation in sections (5% of final grade). Participation in sections is expected, and attendance will be taken. Students may miss up to two section meetings without penalty; additional absences will result in a loss of participation points.

Grading Scale

At the end of the term, students will receive a grade, based on the scale below.

A = 90-100

B = 80-90

C = 70-80

S = 70-100

NC = BELOW 70

We will post problem sets at least 3 days before they are due, via Canvas. Assignments will be submitted and graded on Canvas. I understand that there are many valid reasons why a student might find an extension on an assignment useful. It is not possible for me to prioritize some of these reasons more than others. In addition, late submission of assignments introduces confusion and inconsistency into our grading process. For these reasons, the following grading policies will apply:

- **Once** during the semester, students can request a 24-hour extension on a problem set. Extension requests must be sent via email to your TA (and cc Professor Zhang) **at least 24 hours prior to the deadline**. The new due date will be 24 hours after the original deadline. Assignments with approved extensions that are submitted after the 24 hour extension will be considered late and are subject to a late penalty (see below). Each student gets one extension to use over the course of the semester.
- Assignments submitted after the due date (day and time) will incur a 1-point penalty per day. After five days, late assignments will no longer be accepted.
- There will be no make-up's for missed in-class quizzes.

I cannot grant incompletes unless there are exceptional circumstances that are approved by a dean.

Academic Support

Brown University is committed to full inclusion of all students. Please inform me early in the semester if you require accommodations for exams or assignments, and receive the appropriate documentation from the university. For more information, please contact Student and Employee Accessibility Services at SEAS@brown.edu. Requests for accommodations for exams should be done as soon as possible (we will not be able to make exam accommodations for requests received the day before an exam).

Students with health-related problems or emergencies should contact me as soon as possible to make accommodations. To reschedule an exam, appropriate documentation (for example, from Health Services or a Dean) is required.

Students in need of short-term academic advice or support can contact one of the deans in the Dean of the College office.

Academic Conduct

Students are welcome to work on problem sets together, but must independently write up and submit their own assignments. Students who submit academic work that uses others' ideas, words, research, or images without proper attribution and documentation are in violation of the academic code and will be reported to the university. Submitting coursework (including quizzes) on behalf of another student is considered a violation of the academic code and will be handled as such.

The use of AI

- Generative AI tools (including but not limited to ChatGPT) are strictly prohibited during in-class quizzes and exams.
- In lectures and sections, we may discuss and use AI tools in guided activities as part of instruction; students should follow the instructor/TA's directions for these activities.
- For problem sets, AI use is permitted as a learning aid (e.g., clarifying concepts or debugging Stata code), but you are responsible for the submitted work. Include a brief note (tool + how used) at the end of the submission.

Books/Materials

There is one required text for the course: Alan Agresti. 2018. Statistical Methods for the Social Sciences: 5th Pearson.

This book should be available in the Brown bookstore and is also widely available online.

In some weeks we will read articles that are available on our course Canvas page under "Files>Readings."

Programming software

In this course, you will need access to Stata. There are a number of ways to obtain it:

- You can access Stata for free through Brown's software distribution site: <http://software.brown.edu/dist/> You can download Stata on your computer, and access will be permitted on campus, or off-campus if you're connected via VPN.
- You can purchase it. This is the best long-term option if you develop an interest in quantitative analysis. You can purchase Stata at a discounted price through their "Grad Plan": <http://www.stata.com/order/new/edu/gradplan.htm> Links to an external site.
- Stata has extensive online documentation accessible through "help" commands, and Academic Technology Services at UCLA has prepared a very extensive set of online tutorials for Stata: <http://www.ats.ucla.edu/stat/stata/default.htm> These resources, supplementing our instruction and help, should be sufficient for this course.

Schedule

programming

Week 1

- Thu 1/22: Introduction to the course and the basis of quantitative analysis

Week 2

- Tue 1/27: Variables & sampling | Agresti Ch. 1–2
- Thu 1/29: Descriptive statistics | Agresti Ch. 3

Week 3

- Tue 2/3: Describing data with tables & graphs | Agresti Ch. 3
- Thu 2/5: Tables & graphs, continued | Agresti Ch. 3

Week 4

- Tue 2/10: Probability and sampling distributions | Agresti Ch. 4
- Tue 2/10: Problem Set 1 released (after class)
- Thu 2/12: Probability and sampling distributions, continued | Agresti Ch. 4

Week 5

- Tue 2/17: No class (Long weekend; no University exercises)
- Tue 2/17: **Problem Set 1 due (11:59pm)**
- Thu 2/19: Statistical inference: samples, point estimates, & confidence intervals | Agresti Ch. 5
- Thu 2/19: Problem Set 2 released (posted on Canvas)

Week 6

- Tue 2/24: **Problem Set 2 Due (11:59PM)**
- Tue 2/24: Confidence intervals, continued | Agresti Ch. 5
- Thu 2/26: Review for Exam #1

Week 7

- Tue 3/3: **Exam #1 (non-cumulative)**
- Thu 3/5: Statistical inference: significance tests | Agresti Ch. 6

Week 8

- Tue 3/10: Significance tests, continued | Agresti Ch. 7
- Tue 3/10: Problem Set 3 released (after class)
- Thu 3/12: Significance tests, continued | Agresti Ch. 6–7
- Sun 3/15: **Problem Set 3 due (11:59pm)**

Week 9

- Tue 3/17: Review for Exam #2
- Thu 3/19: **Exam #2 (non-cumulative)**

Week 10

- Tue 3/24: No class (Spring Recess)
- Thu 3/26: No class (Spring Recess)

Week 11

- Tue 3/31: Analyzing associations between categorical variables | Agresti Ch. 8
- Thu 4/2: Linear regression | Agresti Ch. 9

Week 12

- Tue 4/7: More on linear regression & intro to inference with multiple variables | Agresti Ch. 10–11
- Tue 4/7: Problem Set 4 released (after class)
- Thu 4/9: Multiple regression | Agresti Ch. 14
- Sun 4/12: **Problem Set 4 Due (11:59pm)**

Week 13

- Tue 4/14: More on multiple regression | Agresti Ch. 14
- Thu 4/16: Multiple regression, continued
- Thu 4/16: Problem Set 5 released (after class)

Week 14

- Tue 4/21: Review for Exam #3
- Tue 4/21: **Problem Set 5 due (11:59pm)**
- Thu 4/23: **Exam #3 (non-cumulative)**