

SOC 3811: BASIC SOCIAL STATISTICS

Summer, 2017

June 12th - August 18th

Lab: Tuesdays 1:30pm-3:15pm

Lecture: Tuesdays and Thursdays 3:30pm-5:20pm

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Office Hours Thurs. 9:00am-11:00

Office Hours Thurs. 1:30pm-3:15

• COURSE OVERVIEW •

Statistics are powerful tools for studying society. For some researchers, they are one of the best ways to understand big trends across time, space, and people. For others, statistics are the kind of elite, technological wizardry that blinds us to important sociological questions about who decides what we know about the world. Some of us think math is fascinating, and some got into this business because we don't speak math.

This class tackles both sides. We want to provide everyone with the skills to understand and use statistical analyses, but we also want to think about where and when these skills are best put to use. The University of Minnesota is especially concerned that students spend time in the classroom “doing the work of the field, not just reading about it,” and so we will take a hands-on approach to working with real life data. By the end of this class, students will be able to:

- **Find statistical information, interpret it, and decide whether to believe it**
- **Manage data and do basic analyses in Stata**
- **Interpret computer output and clearly communicate that information to others using plain language and effective visual figures**

Today, everything is data-driven. Whether you plan to go into non-profit work, policy analysis, the corporate world, graduate school, or just want to be a better consumer of information, these skills will serve you well.

This course also fulfills UMN's **Mathematical Thinking Core**. We will be discussing the math behind each statistical concept as both a body of knowledge that is worth understanding on its own and a logical tool that can help us work through real-world problems. While we will be working through a few calculations to do this, the point of these exercises will be to improve your ability to explain what a particular process does to data and how we should interpret the results.

“Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write.” —*H.G. Wells*

• REQUIRED COURSE MATERIALS •

- Textbook: Diez, Barr, and Çetinkaya-Rundel. 2015. *OpenIntro Statistics*. Third Edition. **FREE** at https://www.openintro.org/stat/textbook.php?stat_book=os
- Calculator [No phone apps]- One that can do the basics and take square roots
- A Backup system for lab work (flash drive, Google Drive, Dropbox, etc.)
- Software- Stata
Stata is available in our lab and in computer labs across campus. You can see which campus labs have this software at <https://it.umn.edu/software>

• ASSIGNMENT STRUCTURE & GRADING BREAKDOWN •

This class is divided into three units, each of which will have an in-class quiz and an analytical project. The raw grade for the course is based on 250 possible points.

Three In-Class Quizzes, 30 points each

Quizzes assess mastery of the course skills including vocabulary, application of the readings, and statistical interpretation. They may include multiple choice questions, short calculations (with formulas provided), and short answer questions asking you to explain results, address conceptual problems, or argue for a particular approach.

Three Project Memos, 40 points each

These lab assignments are designed to offer hands-on experience using real data to develop and present findings. All materials will be available at the course Moodle site. We will offer detailed requirements, grading rubrics, and “how to” guides in class. Everyone will select one of three practice survey data sets to use for all of the memos:

- *The American Mosaic Project* (2003): a good choice for those interested in public opinion, diversity, race, religion, tolerance, prejudice, and community.
- *Americans’ Perceptions of Artists Survey* (2002): a good choice for those interested in non-profit work, fine arts, or market research.
- *National School Crime Survey* (2004): a good choice for students in the law, crime, and deviance specialization or those interested in education research.

Attendance and Participation: 40 points total

Attendance is measured by daily in-class survey feedback.

Participation is measured subjectively by the instructor and the TA. See “Fine Print” for details.

• COURSE SCHEDULE •

Bold indicates readings that should be completed before class each day. Chapters correspond with *OpenIntro Statistics*, topical readings will be posted on Moodle. TBA readings will be research pieces curated based on students' interests.

Week of	Tuesday	Lab	Thursday
UNIT 1: DESCRIPTIVE STATISTICS			
June 13	<u>Introduction & Types of Data</u> Ch. 1 & Food Stamps	Intro & Summary	<u>Descriptive Stats & Visualization</u> Ch. 1 & MPLS Minimum Wage
June 20	<u>Sampling & Probability</u> Ch. 2 & Election Polling	Graphing, tables, and visualization	<u>Relationships & Standardization</u> Ch. 3 & Silly Correlations
June 27	<u>Communication with Data</u> Review & Supplemental Work	Finish A1	<u>Assessment Day</u> Turn in Assignment 1, Quiz 1
UNIT 2: INFERENCE STATISTICS AND HYPOTHESIS TESTING			
July 4	No Class: 4th of July Lab on Thursday (same time)	A1: Feedback Confidence Intervals	<u>Populations & Hypotheses</u> Ch. 4 & Bad Uses of Polling, P-Values
July 11	<u>Continuous Data (T-Tests)</u> Ch. 5 & Beer and Wine	T-test, χ^2 , and ANOVA	<u>Categorical Data (ANOVA & Chi2)</u> Ch. 6 & Marketing Strategy
July 18	<u>Why Methods Matter</u> Review & Supplemental Work	Finish A2	<u>Assessment Day</u> Turn in Assignment 2, Quiz 2
UNIT 3: REGRESSION ANALYSIS			
July 25	<u>Linear Regression</u> Ch. 7 & Art and Dating	A2: Feedback Linear reg.	<u>Linear Regression Continued</u> Ch. 7
Aug 1	<u>Multivariate Linear Regression</u> Ch. 8 & TBA	Reg. Continued	<u>Logistic Regression</u> Ch. 8 & TBA
Aug 8	<u>Applying Regression 1</u> TBA	Finish A3	<u>Applying Regression 2</u> Turn in A3
Aug 15	<u>Beyond Regression</u> Final Quiz Review & Evaluations	A3 Feedback Quiz Review	Final Quiz 3

• THE FINE PRINT •

On The Class

Attendance: Lectures in this class are never simply lectures. Learning statistics is like learning a foreign language and requires immersion. Each class uses lecture, interactive work, and group discussion. Lecture slides might be posted on Moodle from time to time, but they are visual aids to the classroom experience and we cannot guarantee they will be clear or helpful if you do not see them presented (i.e. performed) in class.

We take attendance and make it a part of the grade, because this class does not work unless everyone shows up and engages with the material. We will take attendance with a mini survey at the end of each class. According to University policy, we excuse absences due to religious holidays, scheduled activities for official University student organizations, subpoenas, or military service **with at least 24-hour advance notice in writing via email**. We also excuse absences due to medical or family emergencies **with appropriate documentation (e.g. a doctor's note)** provided to your TA as soon as possible upon your return.

Teaching Style: We want to make statistics relevant, clear, and interesting. Students should come to class prepared to actively engage by participating in discussion and asking questions about the reading. In return, you can expect a well-prepared lesson with lots of opportunities for conversation, practice, and exam preparation. **I am a big believer in the WGAD question (Who gives a damn?). Please feel free to ask this at any point during class, and I will do my best to explain why a concept is valuable to know.**

Accessibility: Come to office hours! The times outlined above are free “drop in” periods, but please also feel free to email me to set up a meeting for another time. This class is condensed for the summer term and statistics in general is a grind. I want to make sure I am radically available to offer whatever advice or help you may need.

I have a **24 hour email policy**. If you email me, you can expect a response within either 24 hours or the next business day (e.g. Monday if emailed Saturday), sometimes faster. I always welcome any questions about assignments or quizzes, but I cannot guarantee a response if emailed the night before they are due.

Etiquette & Participation: Please bring a notebook, pen, and calculator to class. You are welcome to bring laptops or cell phones to class, but please use them responsibly as a way to supplement the class experience. If we see them as a distraction, we reserve the right to ban them from lecture. Please do not disrupt or detract from others' learning.

Your participation grade is not based on the volume or frequency of participation, but rather the sustained quality of participation. For those who have introverted tendencies and may not feel comfortable speaking often in class, please come see me in office hours where we can adjust the grading ratio to lean more heavily on written work. Extroverts (like myself) will work on checking our tendency to ramble and make space for everyone to contribute. I have a mean nose for b.s. chatter.

Data Disclaimer: We use a number of short, in-class surveys to take attendance, collect real-time feedback, and provide example data sets to illustrate the material. This means we will be collecting data from you about your opinions about the course and general interests and opinions. In the interest of transparent and ethical research, we want to make sure you understand exactly what we collect and how we use it.

1. Your responses to these surveys are **confidential**. Only myself and the TA will have access to the data for analysis. Like the grade book and other standard student information, we keep this data secure according to University standards, under strong password protection on both our computers and our University Google accounts.
2. When we use this survey data for examples during class, all analyses that we share are **anonymized** in two ways. First, we remove any direct identifying information, such as names and student numbers. Second, when information may indirectly identify students (e.g. if one or more students is significantly younger or older than the majority of the class), we will remove or obscure that information such that individual students will not be identified by our lectures.
3. University policy dictates that instructors must keep their grade books for a minimum of one year after a class is finished. Any supplemental data we collect from these surveys will either be destroyed when the grade book is destroyed, or will have identifying information destroyed such that permanently-anonymized information can supplement data collection in future courses.

On Assignments

Late work: Don't do it. It backs up our grading, delays your feedback, and ultimately creates more work at the last minute for everyone. Lab sessions are designed to offer ample time to work on assignments. We generally will not accept late work. Please see your TA in advance if you need to discuss assignments in the case of excused absences, and you are *always* welcome to turn in work early if you have to miss class.

Missing Quizzes: We cannot offer make up quizzes unless you provide documentation for an appropriate absence, according to the University guidelines. If possible, contact us *before* an exam to set up an alternative time if you know you will have an excused conflict. Of course, emergencies do happen, and please contact us ASAP if they do so we can determine a solution.

Academic Dishonesty: The assignments are designed so that students must produce their own unique work and cannot blatantly copy each other. We will also take standard precautions to make sure cheating does not occur during quizzes. I am usually quite flexible on most administrative matters, but I abhor cheating and my policies are informed by a righteous anger. Hellfire and brimstone, you know. Cheating will result in a failed assignment and the filing of an official report with the University. At maximum it will result in a failing grade for the class.

On Grading

High Standards, Low Stakes, Don't Panic! My grading policy is different from other university approaches, especially in the way I teach writing. It follows a "growth mindset" approach that emphasizes revision and sustained effort as central concepts for learning. I grade written work harshly. "A" grades are reserved for exceptional work, while "B" and "C" grades indicate work that meets basic expectations or goes just a little further. **Don't panic!** I also know that GPAs matter a great deal and that statistics is a required course for the sociology degree. I design my grading so that these tough evaluations are balanced with early feedback on drafts, opportunities for revision, and very clear grading standards outlined by rubrics. A single bad grade will not haunt you to the end of the class. Instead, we want to create opportunities to get solid, honest feedback and improve your skills.

Raw Scores: We will use the breakdown below to calculate grades out of 250 possible points. You can use this scale to follow along as we return assignments and quizzes. We may make adjustments to these raw grades in line with the policy above. In most cases, these adjustments will only shift scores by half a letter grade.

93-100 %	A	77-79 %	C+	> 60%	F
90-92 %	A-	73-76%	C		
87-89 %	B+	70-72%	C-		
83-86 %	B	67-69%	D+		
80-82 %	B-	60-66%	D-		

Extra Credit: Exams will offer generous *partial* credit. We generally will not offer extra credit in this course, with the exception of the introductory background survey.

Pass/Fail Etc.: Students taking the course on pass/fail grading scale must receive a “C” or higher in order to receive a passing mark for the course. Incomplete grades will only be granted under extreme circumstances and you must have a prior written agreement with the instructor in order to receive an incomplete in this course.

If you disagree with a grade and would like to dispute it: Please wait 24 hours after you receive it to contact us. After that period please contact us *in writing via email* with information about the assignment or exam in question, the grade received, and a justification for why the grade should be changed (referencing all appropriate course materials). We can then either set up a meeting to discuss further or offer a decision within 2-5 business days.

Accommodation For Students With Disabilities: Of course! Please let us know as early as possible with documentation from Disability Services. We are happy to help.

Additional Resources

Student Writing Support 612.625.1893, <http://writing.umn.edu/sws/>
 Disability Services 612.626.1333, <https://diversity.umn.edu/disability/>
 Student Counseling Services 612-624-3323, <http://www.uccs.umn.edu/>
 Smart Learning Commons <https://www.lib.umn.edu/smart>

COLLEGE OF LIBERAL ARTS POLICIES

GRADES: University academic achievement is graded under two systems: A-F (with pluses and minuses) and S-N. Choice of grading system and course level (1xxx/3xxx/4xxx) is indicated on the registration website; changes in grade scale may not be made after the second week of the semester. Some courses may be taken under only one system; limitations are identified in the course listings. The Department of Sociology requires A-F registration in courses required for the major/minor. University regulations prescribe the grades that will be reported on your transcript.

- A Represents achievement that is outstanding relative to the level necessary to meet course requirements (4.00 grade points)
- A- 3.67 grade points
- B+ 3.33 grade points
- B Achievement significantly above the level necessary to meet course requirements (3.00 grade points)
- B- 2.67 grade points
- C+ 2.33 grade points
- C Achievement that meets the basic course requirements in every respect (2.00 grade points)
- C- 1.67 grade points
- D+ 1.33 grade points
- D Achievement worthy of credit even though it fails to meet fully the course requirements (1.00 grade point)
- F Performance that fails to meet the basic course requirements (0 grade points)
- S Represents achievement that is satisfactory, which is equivalent to a C- or better.
- N No credit. Its use is now restricted to students not earning an S on the S-N grade base
- I Incomplete, a temporary symbol assigned when the instructor has a "reasonable expectation" that you 1) can successfully complete unfinished work on your own no later than one year from the last day of classes and 2) believes that legitimate reasons exist to justify extending the deadline for course completion. The instructor may set date conditions for make-up work. If a course is not completed as prescribed or not made up as agreed within the year, the I will lapse to an F if registered on the A-F grade base or an N if registered on the S-N grade base.
- W Official withdrawal from a course after the end of the second week of the semester. You must file a course cancellation request before the end of the sixth week of the semester to ensure that the W, rather than the F, will be formerly entered on your record.

FINAL EXAMINATIONS (see schedule on the Calendar web site at <http://onestop.umn.edu/onestop/Calendars/FinalExams.html>): You are required to take final examinations at the scheduled times. Under certain circumstances, however, you may request final examination schedule adjustment in your college office. Instructors are obligated to schedule make-up examinations within the final examination period for students who have three final examinations within a 16-hour period. Instructors also are encouraged to reschedule examinations for students with religious objections to taking an examination on a given day. You must submit your request for an adjustment in your schedule at least two weeks before the examination period begins. For assistance in resolving conflicts, call the CLA Student Information Office at 625-2020. If you miss a final, an F or N is recorded. You must obtain the instructor's permission to make up the examination. Final examinations may be rescheduled by the instructor only through the official procedure for that purpose (as noted on the above web page). Final examinations may not be scheduled for the last day of class or earlier or for Study Day. If an examination is rescheduled at the instructor's request, and you have an examination conflict because of it, you are entitled to be given the final examination at an alternative time within the regularly scheduled examination period for that semester.

CLASS ATTENDANCE: As a CLA student, you are responsible for attending class and for ascertaining the particular attendance requirements for each class or department. You should also learn each instructor's policies concerning make-up of work for absences. Instructors and students may consult the CLA Classroom, Grading, and Examination Procedures Handbook for more information on these policies (<http://advisingtools.class.umn.edu/cgep/>).

COURSE PERFORMANCE AND GRADING: Instructors establish ground rules for their courses in conformity with their department policies and are expected to explain them at the first course meeting. This includes announcement of office hours and location, the kind of help to be expected from the instructor and teaching assistants, and tutorial services, if available. The instructor also describes the general nature of the course, the work expected, dates for examinations and paper submissions, and expectations for classroom participation and attendance. Instructors determine the standards for grading in their classes and will describe expectations, methods of evaluation, and factors that enter into grade determination. The special conditions under which an incomplete (I) might be awarded also should be established. The college does not permit you to submit extra work to raise your grade unless all students in the class are afforded the same opportunity.

CLASSROOM BEHAVIOR: You are entitled to a good learning environment in the classroom. Students whose behavior is disruptive either to the instructor or to other students will be asked to leave (the policies regarding student conduct are outlined in the CLA Classroom, Grading, and Examination Procedures on-line at <http://advisingtools.class.umn.edu/cgep/>).

ELECTRONIC DEVICES: University instructors may restrict or prohibit the use of personal electronic devices in his or her classroom, lab, or any other instructional setting. For the complete policy, visit: <http://policy.umn.edu/education/studentresp>

SCHOLASTIC CONDUCT: The University Student Conduct Code defines scholastic dishonesty as follows:

Scholastic Dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. Students cannot evade (intentionally or unintentionally) a grade sanction by withdrawing from a course before or after the misconduct charge is reported. This also applies to late withdrawals, including discretionary late cancellation (also known as the "one-time-only drop"). For the complete policy, visit: http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf

STUDENT MENTAL HEALTH AND STRESS MANAGEMENT: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via <http://www.mentalhealth.umn.edu/>.

A REMINDER OF RELEVANT POLICIES AND PROCEDURES

*** SOCIOLOGY DEPARTMENT POLICIES ***

GRADE INFORMATION: Grades are due in the Office the Registrar within 3 business days after the final examination. No information regarding grades will be released by the department office staff to anyone except designated personnel in Records and college offices. Students may access their own grades through their computer account. They may do this by following the directions on the One Stop web site at <http://onestop.umn.edu/>.

INCOMPLETES: It is the instructor's responsibility to specify conditions under which an Incomplete (I) grade is assigned. Students should refer to the course syllabus and talk with the instructor as early as possible if they anticipate not completing the course work. Coursework submitted after the final examination will generally be evaluated down unless prior arrangements are made in writing by the instructor. University policy states that if completion of the work requires the student to attend class in substantial part a second time, assigning an "I" grade is NOT appropriate. Incompletes are appropriate only if the student can make up the coursework independently with the same professor.

MAKE-UP EXAMINATIONS: Arrangements for special examinations must be made directly with the instructor who taught the course and who is responsible for approving and supervising the examination or making individual arrangements. Circumstances for missing an exam include, but are not necessarily limited to: verified illness, participation in athletic events or other group activities sponsored by the University, serious family emergencies, subpoenas, jury duty, military service, and religious observances. It is the responsibility of the student to notify faculty members of such circumstances as far in advance as possible.

GRADE CHANGES: Grades properly arrived at are not subject to renegotiation unless all students in the class have similar opportunities. Students have the right to check for possible clerical errors in the assignment of grades by checking with the instructor and/or teaching assistant.

Students with justifiable complaints about grades or classroom procedures have recourse through well-established grievance procedures. You are expected to confer first with the course instructor. If no satisfactory solution is reached, the complaint should be presented in writing to the department Director of Undergraduate Studies or the Coordinator of Undergraduate Advising (909 Soc Sci). If these informal processes fail to reach a satisfactory resolution, other formal procedures for hearing and appeal can be invoked. See the departmental advisor in 923 Social Sciences to explore options.

DISABILITY SERVICES: Students with disabilities that affect their ability to participate fully in class or to meet all course requirements are encouraged to bring this to the attention of the instructor so that appropriate accommodations can be arranged. For more info contact Disability Resource Center in 180 McNamara.

SEXUAL HARASSMENT: University policy prohibits sexual harassment as defined in the December 1998 policy statement, available at the Office of Equal Opportunity and Affirmative Action. Questions or concerns about sexual harassment should be directed to this office in 419 Morrill Hall.

SOCIOLOGY PROGRAMS INFORMATION: The Sociology Department offers two options for the Bachelor of Arts degree and a Bachelor of Science degree. Students interested in majoring in Sociology should view the online-information session about the major. Further information can be obtained from the following persons and offices or online at <http://cla.umn.edu/sociology>

General information, Sociology Department, 909 Social Sciences - 624-4300
Coordinator of Undergraduate Advising, Bobby Bryant, 923 Social Sciences – 624-4300
Director of Undergraduate Studies, Professor Joe Gerteis, 1125 Social Sciences - 624-1615
Soc Honors Faculty Representative, Prof. Joachim Savelsberg, 1144 Social Sciences - 624-0273
Director of Graduate Studies, Professor Jeylan Mortimer, 1014B Social Sciences – 624-4064 and/or
Graduate Program Associate, Becky Drasin, 927 Social Sciences - 624-2093

Undergraduate jobs, internships, volunteer and research opportunities, scholarships, and much more can be found in the Undergraduate Resources site - <https://sociologyundergrad.wordpress.com/>