

San José State University
Department of Sociology and Interdisciplinary Social Sciences
SOCI/SOCS 15, Statistical Applications in the Social Sciences, Section 80,
Spring, 2023

Course and Contact Information

Instructor:	Jason DeHaan (he/him)
Telephone:	408-755-0522
Email:	jason.dehaan@sjsu.edu
Office Hours:	Tuesday: 12:00 to 1:00 pm (online, by appointment)
	Wednesday: 2:00 to 3:00 pm (online, drop-in)
Class Days/Time:	None
Course Website:	sjsu.instructure.com
Prerequisites:	Math Enrollment Category M-I, M-II, or M-III, or completion of a GE Area B4 course with a grade of C- or better
GE/SJSU Studies Category:	Area B4 Mathematical Concepts

Course Description

This course will introduce you to statistical applications, particularly statistical inference, including measures of central tendency, variation, normal distributions, probability, estimation, hypothesis testing, measures of association, correlation, linear regression and the analysis of variance.

Course Format

This is an asynchronous online course. This means that there are no scheduled course meetings or live lectures, and you will not be required to log in to participate at a scheduled time. All course materials, including readings, videos/lectures, and assignments, will be shared on Canvas. You will have the flexibility to complete the coursework according to your own schedule but will need to organize that schedule around set assignment due dates.

Course Website

All Course materials such as the syllabus, reading, lecture videos, assignment instructions, etc. can be found at the [Canvas Learning Management System course login website](#). You are responsible for regularly checking the course Canvas page and your SJSU email to learn of any updates. For help with using Canvas, see the [Canvas Student Resource page](#).

Communication and Messaging

The table below contains a list of ways that you can communicate with me.

Communication Method	Access Information	Notes
Email	jason.dehaan@sjsu.edu	My preferred contact method.
Canvas Messaging	The Canvas messaging system	Canvas messaging is OK but I prefer to use email.
Text	408-755-0522	Text messaging is best for simple questions or urgent matters.
Phone Call	408-755-0522	I only answer my phone for scheduled meetings. Schedule a meeting with Calendly .
Zoom	Drop-in office hours link I will email you a link for scheduled meetings.	Schedule a meeting with Calendly .

Office Hours

My office hours are held via Zoom or phone only; I do not hold in-person meetings.

- My Tuesday office hours are held from 12:00 to 1:00 and are appointment-only. You can schedule a meeting using [Calendly](#). We can meet via Zoom or phone, and you can select the option you prefer when you sign up.
- My Wednesday office hours are drop-in and held on Zoom from 2:00 to 3:00. You can access them using [this link](#). I only hold meetings individually (unless a specific request is made) and meetings are first-come, first-serve. If you attend while I'm meeting with someone else, you'll have to wait until my meeting with them is completed.

GE Learning Outcomes

The student learning and content goals for Area B4 courses include the following:

1. Using mathematical methods to solve quantitative problems. Throughout the course, we will use mathematical operations and a calculator to solve statistical problems. Students should be familiar with basic algebraic operations as we will use statistical formulas to solve statistical problems. Test items will typically include true/false questions and short answer word problems.
2. Using mathematics to solve real life problems. Practice problems, homework problems, and test questions will reflect true-to- life situations and contemporary events.
3. Arriving at conclusions based upon numerical and graphical data. Students will gain familiarity with the organization and representation of quantitative data in various forms. Students will learn to read and interpret statistical output including tables, graphs, rates, percentages, and measures of central tendency and variation.
4. Applying mathematical concepts in one or more areas. After covering introductory concepts and procedures, the course will focus on probability and statistical inference. These concepts and methods

are central to statistical analysis. By applying statistical inference, students will see how analytical techniques underscore many of the claims that they learn in Sociology courses.

5. Incorporating issues of diversity. Classroom examples and test items will frequently deal with issues of diversity. Expect examples that incorporate variations or diversities of race, ethnicity, national origin, religion, sex, physical abilities, age, marital status, citizenship, economic levels, and sexual orientation.
6. Writing requirements (minimum 500 words): In clear and concise language, students will be interpreting their results both in assignments and when responding to questions on exams. Writing skills are important. The thoroughness of explanations, coherence and conciseness will be considered in evaluating this part of students' work.

Course Resources

Textbook

There is no required textbook. All readings will be shared on Canvas in a digital format.

SPSS Statistical Analysis Software

You will need access to SPSS to perform the required data manipulation and statistical analysis for this course. If you use a computer running Windows, MacOS, or Linux (not iOS, Android, or Chrome OS), you can download and install SPSS on your computer. If you do not have a computer running one of those operating systems, you will have to borrow a laptop from the SJSU library. There are no SPSS alternatives that will run on iOS, Android, or Chrome OS devices.

You can find additional information about SPSS on the course Canvas page.

Word Processing Software

I recommend that you use Microsoft Word for the writing that you will do in this class. While options like Google Docs and Apple's Pages are acceptable, they are not as fully featured as Word and frequently lead to formatting issues. You have access to the entire Microsoft Office suite (which includes programs like Word, PowerPoint, and Excel) as a student. This will allow you to download the applications to your computer or access the web-based versions. To get access to Microsoft Office, please visit [the Office 365 Education site](#). It will require you to verify your eligibility and create an account using your SJSU email.

Coursework

Workload Statement

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

Assignment	Due Date	Percent of Grade
Course Introduction Assignments		2
Profile Photo	January 26	0.5
Getting to Know Each Other Discussion Post	January 26	0.75
Course Introduction Quiz	January 26	0.75
Module and Video Quizzes	Due Weekly	43

Homework	Due Weekly	55

Course Introduction Assignments

You will have three introductory assignments to complete. These include uploading a profile photo, introducing yourself in a discussion thread, and taking a quiz about the Course Introduction module.

These assignments cannot be submitted late. The discussion post is used to take attendance and failure to complete it will result in you being dropped from the class.

Module and Video Quizzes

There are two different types of quizzes you will complete: module quizzes and video quizzes. The point value for each quiz will depend on the number of questions. Each question will be worth one point and the quizzes are worth 43 percent of your grade overall. You can expect there to be roughly ten to twelve quiz questions per week but that is not consistent. The quizzes will be timed but the amount of time you are given will depend on the number and difficulty of the questions.

- Module quizzes: There will be 14 total module quizzes, one for each week of class (excluding the Course Introduction Module Quiz). Your two lowest module quiz scores will be dropped.
- Video quizzes: I have begun to gradually introduce video quizzes into my courses as I record new lecture videos. They will not be implemented consistently but you can expect some lecture videos to have quizzes integrated into them. The video quizzes can be retaken as many times as you'd like.

The standard late policy will apply to the quizzes. You will have a three-day grace period to complete them without any late penalty applied. After that, you will have five additional days to complete the quizzes with a 10 percent penalty applied for each day they are late.

Homework

You will complete eleven homework assignments over the course of the semester, one for each module. They will require you to apply what you learned in the modules and will be composed primarily of problems that require calculation and interpretation. There will also be some short answer questions.

Most of the homework assignments will also require you to practice what you learned using SPSS, which is statistical analysis software. To complete the SPSS requirements, you will need to download data from the 2018 General Social Survey, a popular social science survey that represents the population of the United States.

The standard late policy will apply to the homework. You will have a three-day grace period to complete them without any late penalty applied. After that, you will have five additional days to complete the homework assignments with a 10 percent penalty applied for each day they are late.

Final Examination or Evaluation

There is no final exam in this course.

Submitting Work

All your work for this course will be submitted on Canvas. Following are my policies regarding the submission of your work and some notes about the submission process.

- All work must be submitted on Canvas and I will not accept emailed assignments.
- I require any written documents you submit to be in .doc, .docx, or .pdf format.

- You can resubmit your work until it has been graded. I do not allow resubmission of graded work. See my Assignment Resubmission policy below for more information.
- Everything you submit on Canvas is saved. When you resubmit an assignment, any previous submissions are saved and available for me to review. Unless you ask me to review an earlier submission, I will only ever look at the most recent submission. This means that resubmitting an assignment never overwrites or deletes your previous submissions.

Grading Information

Determination of Grades

Grades will be calculated by tallying up the total points earned on assignments and then weighting them according to the percentages provided in the assignment table. Canvas handles this process automatically and while your grade will fluctuate as you complete your work over the course of the semester, your grade on Canvas will always be accurate and reflect your standing in the class.

Final letter grades will be assigned based on the table below. I use standard rounding rules (any decimal 0.5 or greater will be rounded up) when I assign final letter grades. For example, if you finish the class with a total of 86.5 points, will round that up to 87.

Grade	Percentage
A+	97 to 100%
A	93 to 96%
A-	90 to 92%
B+	87 to 89 %
B	83 to 86%
B-	80 to 82%
C+	77 to 79%
C	73 to 76%
C-	70 to 72%
D+	67 to 69%
D	63 to 66%
D-	60 to 62%
F	Below 60%

Extra Credit

I do not have any extra credit planned and will only offer it if some opportunity where I think offering additional work is appropriate comes up. Any extra credit opportunities will be created as assignments on Canvas and announced there as well.

Late Work

The course introduction assignments cannot be submitted late. Those are used to take start-of-the-semester attendance and failure to submit them could result in you being dropped from the course.

All other course assignments can be submitted up to three days late without penalty. This is a grace period that everyone receives, and you do not need to reach out to me to request it. After the three-day grace period, your work can be submitted up to five days late. A 10 percent penalty will be applied for each day your work is late.

Assignment Resubmission

I do not allow you to resubmit graded work to improve your grade. I consider all assigned grades final unless I made some mistake (tell me if you think I did!). However, I am always willing to review your work before you submit it for a grade. If you'd like me to review your work, please submit it to the appropriate assignment prompt on Canvas and then message me to let me know you'd like feedback. If I know you are uploading your work for feedback, I will not assign a grade.

Policies

Late Work Submission

You will find my late work submission policy above in the "Grading Information" section of this syllabus.

Incompletes

Incompletes are only intended to be assigned when a student has completed most of the coursework (70-80 percent) but is facing some hardship that prevents them from completing the rest. I am never going to evaluate a student request to take an incomplete by calculating the exact percentage of work that was completed, but I will take what is left to be done into consideration.

If you want to take an incomplete in the course, please reach out to me as soon as possible to discuss it. It helps if you provide me a list of the work you have left to complete along with a general description of what stands in the way of you completing your work. I do not need specifics and I will never pry to get more information than you want to share. I do not need documentation or any other type of proof.

You will find a description of the University policy for incompletes [at the SJSU Academic Expectations \(Policies\) webpage](#).

Late Drop Policy

If you need to drop one or more of your courses after the drop deadline, please review the University's [late drop policy](#).

University Policies

University policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on [Syllabus Information web page](#), which is hosted by the Office of Undergraduate Education. Make sure to visit this page to review and be aware of these university policies and resources.

SOCI/SOCS 15 / Statistical Applications for the Social Sciences, Spring 2023, Course Schedule

This schedule provides a weekly overview of when coursework will be due. The dates reflect the beginning of each week of the semester, not the specific due dates. Please refer to the coursework section of this syllabus and Canvas for specific due dates.

Not all the lecture videos and video quizzes are listed here. You will find those in the Canvas modules.

This schedule is subject to change with fair notice. Any changes will be announced on Canvas.

Course Schedule

Module		Date	Learning Materials	Assignments
A	Course Introduction	Jan. 25	Watch: Course Welcome Video Review: Course Introduction Module Read: Syllabus	Profile Photo Getting to Know Each Other Discussion Post Course Introduction Quiz
1	Introduction to Social Statistics	Jan. 30	Read: The What and Why of Social Statistics Watch: Introduction to Social Statistics Watch: Introduction to Social Statistics: The Research Process Watch: Levels of Measurement Watch: How to Install SPSS	Introduction to Social Statistics Video Quiz Introduction to Social Statistics: The Research Process: Video Quiz Introduction to Social Statistics Module Quiz Introduction to Social Statistics Homework
2	The Organization and Presentation of Data	Feb. 6	Read: The Organization and Presentation of Data Read: The General Social Survey Watch: The Organization and Presentation of Data: Introduction Watch: The Organization and Presentation of Data: Frequency Distributions Watch: The Organization and Presentation of Data: Proportions Watch: The Organization and Presentation of Data: Percentages Watch: How to Download, Save, and Open the GSS Data Watch: Getting Started with SPSS	How to Create Frequency Distributions and Graphs in SPSS Video Quiz The Organization and Presentation of Data Module Quiz The Organization and Presentation of Data Homework

Module		Date	Learning Materials	Assignments
			Watch: How to Create Frequency Distributions and Bar Graphs in SPSS	
3	Measures of Central Tendency	Feb. 13	Read: Measures of Central Tendency Watch: Introduction to Measures of Central Tendency Watch: Mode and Median Watch: Mean Watch: Distributions Watch: How to Calculate Measures of Central Tendency in SPSS	Measures of Central Tendency Module Quiz Measures of Central Tendency Homework
4	Measures of Variability	Feb. 20	Read: Measures of Variability Watch: Measures of Variability: Introduction Watch: Measures of Variability: IQV Watch: Measures of Variability: Range and IQR Watch: Measures of Variability: Variance and Standard Deviation	Measures of Variability Module Quiz Measures of Variability Homework
		Feb. 20	Last Day to Drop Classes Without a “W” Grade and Last Day to Add Classes via MyJSU	
5	The Normal Distribution	Feb. 27	Read: The Normal Distribution Watch: The Normal Distribution: Introduction	The Normal Distribution Module Quiz One
		Mar. 6	Watch: The Normal Distribution: Percentages and Z Scores Watch: The Normal Distribution: Percentiles	The Normal Distribution Module Quiz Two The Normal Distribution Homework
6	Sampling and Sampling Distributions	Mar. 13	Read: Sampling and Sampling Distributions Watch: Sampling and Sampling Distributions: Introduction and Key Terms Watch: Sampling and Sampling Distributions: Probability	Sampling and Sampling Distributions: Probability Video Quiz Sampling and Sampling Distributions Module Quiz One

Module		Date	Learning Materials	Assignments
		Mar. 20	Watch: Sampling and Sampling Distributions: Probability Sampling Watch: Sampling and Sampling Distributions: Sampling Approaches Watch: Sampling and Sampling Distributions: Sampling Error Watch: Sampling and Sampling Distributions: The Sampling Distribution of the Mean	Sampling and Sampling Distributions Module Quiz Two Sampling and Sampling Distributions Homework
		Mar. 27	Spring Recess	
7	Estimation	Apr. 3	Read: Estimation Watch: Estimation: Introduction and Key Terms Watch: Estimation: Confidence Intervals for Means Watch: Sample Size and Confidence Intervals Watch: Estimation: Confidence Intervals for Proportions	Estimation Module Quiz Estimate Homework
8	Testing Hypotheses	Apr. 10	Read: Testing Hypotheses Watch: Testing Hypotheses: Introduction Watch: Testing Hypotheses: The Five Steps and Example Problem Watch: Testing Hypotheses: Step One: Check Assumptions	Testing Hypotheses Module Quiz One
		Apr. 17	Watch: Testing Hypotheses: Step Two: State Hypotheses and Select Alpha Watch: Testing Hypotheses: Step Three: Select the Sampling Distribution and Specify the Test Statistic Watch: Testing Hypotheses: Step Four: Compute the Test Statistic Watch: Testing Hypotheses Step Five: Make a Decision and Interpret the Results	Testing Hypotheses Module Quiz Two Testing Hypotheses Homework
		Apr. 21	Semester Withdrawal Deadline	

Module		Date	Learning Materials	Assignments
9	Bivariate Tables	Apr. 24	Read: Bivariate Tables Watch: Bivariate Tables: Introduction Watch: Bivariate Tables: Constructing Bivariate Tables Watch: Bivariate Tables: Compute Percentages Watch: Bivariate Tables: Relationships Watch: Bivariate Tables: Elaboration	Bivariate Tables Module Quiz Bivariate Tables Homework
10	Chi-Square	May 1	Read: The Chi-Square Test and Measures of Association Watch: Chi-Square: Introduction Watch: Chi-Square: Calculating Chi-Square Watch: Measures of Association	Chi-Square Module Quiz Chi-Square Homework
11	Analysis of Variance	May 8	Read: Analysis of Variance Watch: Analysis of Variance: Introduction Watch: Analysis of Variance: Hypothesis Testing with ANOVA	Analysis of Variance Module Quiz Analysis of Variance Homework
		May 15	Last Day of Instruction	
		May 22	Last Day of Class	
		May 26	Initial Faculty Grade Deadline	
		May 31	Final Faculty Grade Deadline	