San José State University
Department of Sociology and Interdisciplinary Social Science
SOCI 15: Statistical Applications in the Social Sciences
Section 1 Fall 2024 (47599 & SOCS 49703)

Course and Contact Information

Instructor:	Jose Bautista
Office Location:	DMH 222
Telephone:	(408) 741-2492
Email:	jose.bautista@sjsu.edu
Office Hours:	Monday, 5:00 6:00 PM
Class Days/Time:	6:00 8:45 PM

GE Learning Outcomes (GELO) (Delete if not applicable)

Upon successful completion of this GE course, students will be able to:

1. Use mathematical methods to solve quantitative problems. Throughout the course, we will use basic mathematical operations and a calculator to solve statistical problems. You should be familiar with basic algebraic operations as we will use statistical formulas to solve statistical problems. Test items will typically include multiple choice questions, quantitative problems requiring calculations, and short answer word problems.

2. Use mathematics to solve real life problems. Practice problems, homework problems, and test questions will reflect true-to- life situations and contemporary events.

3. Arrive 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 spread.

4. Apply 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. Incorporate 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. In clear and concise language, you will be interpreting your results both in assignments and when responding to questions on your exams. Your writing skills are important. The thoroughness of your explanations, your coherence and your conciseness will be considered in evaluating this part of your work.

Course Learning Outcomes (CLO)part of your workcrdif(ge)1 18s innt g0 G4(rc)7(e)4(ment scourse)6(le5(e)4(ll)i)13(r(a)4(64

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Available at bookstore http://sjsu.bncollege.com/

Other materials

You will need access to the web to use Canvas and Zoom to meet online, take exams, and post assignments and download materials.
I would like to encourage you to turn your video camara on during class time so I can get to know you better. I understand you may not wish to for a variety of reasons. So how about a compromise. Use your camara as much as you can, but feel free to turn it off when you need to, to take a break, to attend to a needy cat, whatever. A lot of what we will do in class will be interactive, so being able to see you will help both of us to connect better, and for you to succeed in class.
Calculator (should be able to do square roots, and you should be comfortable using it).

Course Requirements and Assignments (Required)

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of

The Sampling Distribution of the Mean
The Central Limit Theorem
Assumptions of Statistical Hypothesis Testing
Stating the Research and Null Hypotheses
Probability Values and Alpha
Hypothesis Testing
Errors in Hypothesis Testing
Z-tests

Exam 3 (Chapter 7-8): 100 points
T-test for one sample
T-test for independent samples
T-test for dependent samples
Bivariate Tables
Chi-Square

Quizzes: Eleven quizzes. Lowest score is dropped. These will be online, and you will have a week to do each of them. Each quiz is worth 20 points.

Quiz	Chapter	Due by 11:58 PM on
Quiz 1	Chapter 1	1-Sep
Quiz 2	Chapter 2	15-Sep
Quiz 3	Chapter 3	22-Sep
Quiz 4	Chapter 4	29-Sep
Quiz 5	Chapter 5	13-Oct
Quiz 6	Chapter 6	20-Oct
Quiz 7	Chapter 7	27-Oct
Quiz 8	Chapter 8	3-Nov
Quiz 9	Chapter 8	17-Nov
Quiz 10	Chapter 9	24-Nov
Quiz 11	Chapter 11	8-Dec

Final Examination or Evaluation

Final Exam: About 50% comprehensive, and worth twice as much as the midterms. You will have the complete Final Examination period available to complete the final exam. Final exam is worth 100 points.

Final Exam (Review plus Chapters 9 & 10): 100 points
Topics covered in exams 1-3
One-way ANOVA
Regression
Correlation
The Scatter Diagram

Data analysis paper: 100 points

Apply all of the techniques learned during the semester to analyze a given data set.
Write a 500 word paper on your findings, including the use of graphical and tabular data representations, to report descriptive statistics, inferential tests, and make predictions.
The paper is due on the same day as the final exam takes place. May 20 at 5:15 PM.

Grading Information

Grades are given on the basis of points earned.

Determination of Grades

3 Exams, 100 points each	300	(33%)
Lowest Exam score	-100	
11 Quizzes, 20 points each	220	(33%)
Lowest Quiz score	-20	
Final Examination & Paper	200	(33%)